An Introductory Address
ON
SOME SURPRISES AND MISTAKES.

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GENTLEMEN,—I feel to-night somewhat out of place in having transferred my seat from amongst the general audience to take for a time that of your President. I accept my new position with a full sense of its great honour and dignity; but I cannot help remembering that it has entailed my severance from the high office of General Secretary of this Royal Academy of Medicine, which I have filled since its foundation and of which I have always been, as any man ought to be, very proud. The Fellows of this College have, however called me to be their President, and in that capacity I begin to-night duties which will, I know, always be instructive to me and, I hope, pleasant to all of us. May I say a word thus early in regard to the attendance? I have sometimes noticed that our meetings were thinner than they ought to be, and that some who could confer much benefit upon us by their experience and their incisive criticism have not always given us the help they might have given. As one grows older there is a tendency to take the rest of home after the increasing duties of the day have been performed. But we are never too old to learn—or, for that matter, to teach. And there is here growing up about us a younger generation, not, I hope, above taking note of some of the experiences of their elders by which they may profit in some way. We have a duty to discharge to them just as we ourselves are debtors to our predecessors. May I, then, hope that in this respect our session will be as bright and vigorous as many that have gone before, and that the meetings of the Surgical Section will continue to be as attractive as they have been. I had intended, until a few days ago, to depart from the usual custom here, and to allow you to proceed at once to the ordinary business of the section because much pressure had prevented me giving attention to the subject-matter of an address. But I learned that it was expected that I should say something in the way of formal opening of our session, and so, in the hurry, I have gathered up a few facts which may not be without some interest to surgeons, and which I put under the title of "Some Surprises and Mistakes."

I think, as a rule, that most students have in their early days a good deal of trust in the sequence of events. They are enamoured by the newness of all around them in the hospitals; they have plenty of work to do, and those who do it have not time to be sceptical. They take what the books tell them so definitely, as though under no circumstances is it possible that there should be any deviation from the course of things as there described. Later they have their faith disturbed as experience grows; but yet to the oldest of us there still remains a belief that under certain conditions certain things must happen. There is deep down in our minds the conviction "that when the brains were out a man must die and there an end"; but how that is upset by our experience! There, for example, is the famous case of the man through whose frontal lobes a heavy iron jumper was driven by a blast and who recovered. I have seen a man who had lost a portion of his occipital bone as large as the palm of my hand and a cupful of brain substance, and yet years afterwards he did not seem to be anything the worse. It is true that these what I may call "accidental experiments" have helped us to be less fearful of interference with the brain, but always with the exactitude which has been helped by deliberate research. Still, for the greater part these rough tearings and bruisings of brain tissue are fatal; and even when with our later and better knowledge they are recovered from they are "surprises." As our experience grows we encounter them. We—and I include physicians as well as surgeons—see cases which according to all rule ought not to live. The prognosis is a fatal result; and yet they do well and disappoint our certainties by their recovery. And then there are those cases which die, and we do not really know why. A man gets a scratch which ought not to hurt a child and he dies none the less surely from shock than if he had suffered some terrible crushing injury of internal organs. What are the curious conditions in the two classes of cases—the powerful vital resistance, as we call it, in the one, which is effective against forces which we regard as unconquerable; and that other class in which vitality is so low and the nervous system so sensitive that it yields at once to what is almost a pretence of injury?

Just let me leave these suggestions for inquiry or speculation and give you one or two examples of many which have come under my own notice. An old man was sent to me as suffering from appendicitis. He had had an attack undoubtedly, but it had cleared up. The only signs remaining were a slightly raised temperature and a thin strip of dulness extending upwards to the iliac crest. I made an opening and found a little pus and an extensive granulation-lined cavity. I scraped it out and drained in the usual way. All went well; but in about a week I was startled to hear that there had been a noisy discharge of flatus from the wound and a sign of fæces on the dressings. When I saw him there was no escape of gas, but the next day I found on the dressings a fæcal concretion quite like a large nutmeg in shape and colour. Of course, it had come from the intestine into the abscess cavity and had perforated the gut wall. But how had this great mass passed through without leaving a large fistulous track, with fæcal extravasation and perhaps worse? There was never again any sign of escape of contents of the bowel, either solid or gaseous, and the patient, having been delivered in this way of his concretion, got quite well without further trouble. It is, I think, plain that although the final act of extrusion took place when the flatus escaped, the opening in the bowel did not then correspond to the actual size of the concretion. Probably the gut at one point became identified by adhesion with the surrounding inflamed area, grasping and closing slowly behind the mass as it passed through into the external cavity. The escape of flatus came from what remained of the opening just before the final closure. Whatever the process the result was one of those "surprises" that come to us, for the passage of so large a mass through the intestinal wall and its discharge externally without causing any permanent mischief shows what nature may do unaided by the surgeon's skill.

In the early part of this year I saw a man who was suffering from a growth in the nose. I recommended him to see Dr. Woods, and I saw him later with Sir Thornley Stoker and Dr. Woods. We came to the conclusion that he was suffering from a malignant tumour of the antrum which had extended to the nose. We recommended an exploratory operation, and, if our opinion was confirmed, that the jaw should be at once removed. He refused the larger operation. The exploration was made by Dr. Woods. We found that the tumour did extend from the antrum, into which I could bore my finger easily. Dr. O'Sullivan, Professor of Pathology in Trinity College, declared the growth to be a round-celled sarcoma. Of that there is no doubt. The tumour returned in a couple of months, and the patient then saw Dr. Semon in London, who advised immediate removal of the jaw. He returned home, and after a further delay he asked to have the operation performed. I did this in May last by the usual method. I found the tumour occupying the whole of the antrum. The base of the skull was everywhere infiltrated. The tumour had passed into the right nose and perforated the septum so as to extend into the left. It adhered to the septum around the site of perforation. This was all removed, leaving a hole in the septum about the size of a florin. He went home within a fortnight. In a month the growth showed signs of return. It bulged through the incision and protruded upon the face. Dr. Woods saw him soon afterwards, as I had declared by letter that a further operation would be of no avail. The tumour had now almost closed the right eye. It was blue, tense, firm, and lobulated, but it did not break. Dr. Woods reported the result of his visit to me and we agreed as to the prognosis. Early in October the patient walked into my study after a visit to Dr. Woods. He looked in better health than I had ever seen him. The tumour had completely disappeared

from the face and I could not identify any trace of it in the mouth. He said he had no pain of any kind. He could speak well when the opening remaining after the removal of the hard palate was plugged, and he was in town to have an obturator made. He has since gone home apparently well. He told me he had applied poultices of comfrey root and that the swelling had gradually disappeared. Now this was a case of which none of us had any doubt at all, and our first view was confirmed by the distinguished pathologist whom I have mentioned and by our own observation at the time of the major operation. Here, then, was another "surprise." I am satisfied as I can be of anything that the growth was malignant and of a bad type. Of course, we know in the history of some tumours that growth is delayed and that in the sarcomata recurrence is often late. But this is a case in which the recurrence occurred twice—the second time to an extreme degree; and yet this recurrent tumour has vanished. What has produced this atrophy and disappearance? I do not know. I know nothing of the effects of comfrey root, but I do not believe that it can remove a sarcomatous tumour. Of course, the time that has so far elapsed is very short; but the fact that this big recurrent growth no longer exists—that it has not ulcerated or sloughed away, but simply, with unbroken covering, disappeared—is to me one of the greatest "surprises" and puzzles that I have met with.

But let me turn to the other topic upon which I have still to speak to you—"mistakes." I confess to having made some in my life. It is often complained that we hear much of the successes of surgery and medicine, but little of the failures and hardly ever of the errors. I am not ashamed to say that I have erred in diagnosis and I know that I have seen others blunder too. When one is in that unpleasant predicament it is satisfactory to know that one is in good company—always supposing that the patient does not suffer from his default. I am afraid that there are none who can truly claim omniscience, although they sometimes look as if they did. But so long as surgery is what it is errors will be committed; and perhaps it would help to make them less if we were only courageous enough to say so, to point out wherein we failed, and to give some warning to others which might help to save them from mistakes.

In 1892 a man consulted me for a bad throat. He was seventy-five years of age and his story was that his throat had been sore for about two months. He spoke with a marked nasal tone. I found the right soft palate and a considerable part of the hard palate occupied by a malignant-looking flattened growth projecting from the surface about an eighth of an inch. There was an ulcer on the free margin of the palate extending to the tonsil. Externally, at the angle of the jaw, was a mass of enlarged glands, fixed and without pain. There had been a good deal of sanious discharge from the nostril, and the posterior naris was blocked by pressure of the engaged tissues. The structures over the alveolar process of the upper jaw at the posterior part were infiltrated and resisting. I had no doubt that it was a malignant growth and I said so. I advised that nothing should be done save the use of a simple antiseptic lotion. Two months later I had a letter to say that a necrosis had set in in the parts and that the whole engaged structures had sloughed away. The fetor was described by Dr. Rutherford as so abominable that he could not stay in the room many minutes. But in the result the ragged chasm left granulated and healed, and the patient is alive to-day at the age of seventy-nine years. Now here was a "mistake," fortunately corrected by nature. I had no doubt that my diagnosis was right, but it must have been wrong. Sometimes, it is true, such endings have been noticed in the case of sarcomatous growths, but this was, I believed, an epithelioma, and I have not heard of such happy endings in cases of that class. I can only say that probably others would have judged as I did and that the evidence seemed strong enough to justify my opinion. But although the growth presented the ordinary clinical characters of epithelioma, and gave evidence of secondary deposit, it is, I think, obvious that it was not of that character. The possibility of its having been a gumma, which ultimately broke down and sloughed away, is, of course, to be considered, although in the particular case I have reason for believing that there was no syphilitic history. Still, I regard it as an error and I have so scored it against myself.

Our secretary, Mr. Lentaigne, will remember that when he was house surgeon at the Richmond Hospital he called me to see a case of supposed strangulated labial hernia. The woman had been admitted the night before suffering from symptoms which had come on suddenly. She had had a lump in her groin which had suddenly become larger, painful, and tense, and then there followed vomiting and great prostration. A short examination was made. The tumour extended from the external abdominal ring into the left labium, and it was so tense that I at once ordered her to be brought to the theatre, where under an anæsthetic I was able to make out the presence of fluid, and I felt sure that I had to deal with a strangulated hernia with an excessive quantity of serum in the sac. Others concurred in that view. I ventured to say, however, from the general appearance of the tumour that if the patient were a man I should call it a hydrocele. A free incision soon settled the doubt, for hydrocele fluid gushed out with great force. There was no hernia at all. The case was a hydrocele of the canal of Nück, of which I had never then seen an example, although I have seen two since. But although the case was an obscure one and the symptoms lent colour to the original diagnosis it was a "mistake," but a mistake which has served me well since that time.

Once, with the concurrence of my colleagues, I removed what I supposed to be a testicle, and which turned out to be a hydrocele. The man had had for some time a swelling on the left side. He had often been tapped and had been so treated immediately before I saw him. He had a large oval tumour, slightly irregular here and there. It occupied the whole of the left side of the scrotum. It was very solid and resisting. There was no normal testicle to be made out. When I had removed it I found on section that it was a hydrocele sac more than half an inch thick filled with old blood-clots. The epididymis was spead out over it like a thin membrane and could be recognised only with difficulty, and the testicle was atrophied almost beyond recognition. His comfort was added to by the operation, yet there remains the fact that we did not recognise what was the real condition of things.

I will not occupy your time by giving details of any more cases, but I could tell you of patients who have been condemned by others as having malignant disease and who are still alive years after the pronouncement; of scirrhus of the breast, many times, which has proved to be nothing worse than a chronic abscess or an adenoma; and of abdominal tumours which on exploration have been declared by the most experienced and wise surgeons to be cancerous, while the patients have belied the diagnosis by living for many years in comparative health. In the few cases I have noted in this discursive way I have mentioned the most interesting—those from which some instruction may be gathered by others as it has been by me. As we grow older and get beyond the trammels of the books we realise one or two things very sharply—the fact that our diagnoses have reached a very high standard of accuracy, and the other fact that there is still a percentage of cases in which the symptoms are so confusing that mistakes must be met with if we bind ourselves to a definite opinion. Still, there are some which ought not to be made if examination is thoroughly carried out; and, therefore, the lesson which we should seek to teach in this matter is, thorough and painstaking searching out of the meaning of signs and symptoms.

There are some cases which are so plain to the experienced surgeon that he can readily come to a decision. Probably he will be right in the majority of instances. But I have seen this facility grow into a dangerous habit. I have no respect for what I may call "snap-shot diagnosis." The first glance almost may be enough to settle the question at issue, but nevertheless the opinion then formed ought to be made as sure as possible by the careful and systematic examination of the patient. We should cultivate this habit ourselves and we should teach our pupils how to acquire it and practise it. Whoever has examined much at the bedside knows how often the candidate seems to want the most elementary knowledge of how to examine a patient; and personally I should estimate more highly the student who knows how to set about finding out the disease, although he might in the end be wrong, than one who could give a diagnosis which chanced to be correct without sufficient justification for it.

I have to apologise to you for these most desultory words; but I hope that although they may not present much that is new to many in this section, they may have the effect of impressing upon others that we are not omnipotent or omniscient. There is no one who, if he has seen much work, can

claim to be free from mistakes. They dog the steps of the best of us. He will do well who recognises this early and tries to learn the important truths they teach—that we must not rely upon any inspiration to help us to a diagnosis, but that it must be reached, if at all, by means which are open to everyone—the diligent seeking out and the just weighing of facts.

ON THE DISINFECTING ACTION OF SODIUM HYPOCHLORITE.

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IN the *Journal of the Society of Chemical Industry*, vol. xv., No. 5 Dr. Clayton draws attention to the disinfecting action of solutions of sodium hypochlorite, and describes experiments conducted by himself and Professor Boyce of University College, Liverpool, which show that sodium hypochlorite even in weak solutions—e g, containing only 0·2 or even 0·1 per cent. of available chlorine—has a decided disinfecting action on non-sporing microbes. The sodium hypochlorite which was used in the experiments of Dr. Clayton and Professor Boyce, and with which I have also made a series of experiments confirming their results, is a fluid of strong bleaching power and is described as containing 10 per cent. available chlorine. It was used in my experiments as solutions in distilled water—1 in 10, 1 in 100, and 1 in 200—and was tested on the following microbes: (1) proteus vulgaris; (2) bacillus coli communis (these two representing typical putrefactive microbes); (3) bacillus typhosus; (4) bacillus diphtheriæ; (5) bacillus of swine fever; (6) vibrio of cholera Asiatica; (7) staphylococcus aureus of ordinary pus; (8) spores of bacillus anthracis; and (9) spores of the anaerobic bacillus enteritidis.

In the case of the first seven microbes cultures on the surface of nutrient agar were made and kept at 37° C. for forty-eight hours; there was by this time copious typical growth in a very active state. The spores of anthrax were derived from an agar surface culture; when transplanted to gelatin or agar they produced typical growth and when injected into the guinea-pig caused fatal anthrax within thirty-six hours. The spores of bacillus enteritidis were derived from an anaerobic culture in grape sugar gelatin that had been established about ten days; the culture was by this time full of spores which, when transplanted into fresh sugar gelatin, yielded normal active growth. The disinfectant fluid—i.e., the hypochlorite of soda—was used in solution; a definite quantity of the fluid is dissolved—i.e., poured into a definite quantity of sterile distilled water kept in a sterile glass-stoppered bottle. Immediately, after a small quantity, generally 5 c.c., of this solution is poured into a sterile test tube, and then a particle of the microbic culture above mentioned is taken up with a sterile platinum loop, introduced into the 5 c.c. of the disinfectant solution, and well shaken so as to form a uniform distribution or emulsion. In all instances the emulsion contained the microbes in very great numbers, being distinctly turbid. By making a similarly turbid emulsion in sterile distilled water, and then making plates to ascertain approximately the number of microbes present in the emulsion, it was found that one platinum loop of the emulsion yielded colonies far too numerous to be counted.

After exposing the microbes in the above emulsion to the disinfectant fluid for a definite time, cultures are made so as to see whether, and to what extent, the microbes have been affected. Of the first eight microbes—viz.: (1) proteus vulgaris; (2) bacillus coli; (3) bacillus typhosus; (4) bacillus diphtheriæ; (5) bacillus of swine fever; (6) vibrio of cholera; (7) staphylococcus aureus: and (8) spores of bacillus anthracis—the inoculation of the sub-culture was made from the emulsion into nutrient broth and on to nutrient agar and then incubated at 37° C. for four days. By this time any living microbes introduced into the sub-culture would have had ample time and opportunity of producing easily visible growth. In the case of the anaerobic spores of bacillus enteritidis the sub-culture was made anaerobically in deep sugar gelatin and incubated at 20·5° C. for six days. In every instance the sub-culture was made by introducing into the culture medium three platinum loops of the emulsion so as to transfer as many microbes as possible from the disinfectant emulsion. As stated above, each loop would hold an uncountable number of microbes.

An important comparative experiment was made at the outset. It was this. By introducing from the disinfectant emulsion three loops of the fluid into the culture medium it might be said that this culture medium received a comparatively large addition of disinfectant which might interfere with—i.e., inhibit—the subsequent growth of the microbes transplanted into the new culture from the disinfectant emulsion, and therefore if no growth occurred in the sub-culture this absence of growth might not be due to the fact that the microbes had been previously killed, but rather that although still living they were incapable of growing owing to the addition to the culture medium of three loops of disinfectant fluid. In order to ascertain whether the addition of three loops of disinfectant emulsion to the new culture medium had any such inhibitory action on the subsequent growth of microbes a series of cultures were made in the following manner. Of disinfecting mixtures (1 in 10, 1 in 100, and 1 in 200—that is, in the strength in which they were used for disinfecting purposes, as will presently be shown), five loops were transferred to each broth and agar in test tubes, then these test tubes were inoculated separately with the above microbes 1 to 8, and incubated. The result was that in all tubes normal and active growth took place, thus showing that the addition of five loops of the disinfectant mixture per culture tube, even of the strength of 1 in 10, had no inhibitory effect on the subsequent growth of the microbes. The experiments on disinfection made with the above nine species of microbes were as follows.

Series 1.—The hypochlorite of soda was used as mixture of 1 in 10—i.e., containing 1 per cent. of available chlorine. The following microbes were used: proteus vulgaris, bacillus coli, bacillus typhosus, bacillus diphtheriæ, bacillus of swine fever, vibrio of cholera, staphylococcus aureus, spores of bacillus anthracis, and spores of anaerobic bacillus enteritidis. 1. After exposure for twenty minutes the result was that in no sub-culture was there any growth; the microbes had been devitalised by the mixture 1 in 10 in twenty minutes. 2. After an exposure for ten minutes the result with the same nine species of microbes was that there was no growth in the case of the first seven species; also in the case of the spores of the anaerobic bacillus enteritidis there was no growth; but in the case of the spores of the bacillus anthracis there was a limited growth in the broth culture, and in the agar culture there was one single colony. On sub-culture this yielded normal growth, which produced typical anthrax in a guinea-pig. While, then, 1 in 10 completely devitalised the spores of anthrax in twenty minutes it did not quite succeed in doing this with all the spores, although it did so with the great bulk of them. 3. The above seven microbes were also killed by an exposure for five minutes, no sub-culture yielding growth. The spores of bacillus anthracis and of the anaerobic bacillus enteritidis were seemingly unaffected, since copious normal growth was obtained in sub-culture.

Series 2.—Hypochlorite of soda used as a watery solution, 1 in 100—i.e., 0·1 per cent. of available chlorine. 1. The following bacilli—the proteus, coli, typhosus, diphtheria, swine fever, cholera, and staphylococcus—were devitalised after an exposure for twenty minutes, there being no growth in the sub-culture. The spores of anthrax and of enteritidis yielded normal and abundant growth. 2. After an exposure for ten minutes the same result was obtained as above. 3. Also after an exposure for five minutes the same result was obtained. It follows, therefore, from this series that hypochlorite of soda in solution of 1 in 100 disinfects the non-sporing microbes above mentioned in five minutes, but does not do this with the spores of anthrax and enteritidis in twenty minutes. 4. For the spores of these two microbes the time of exposure was then prolonged to (*a*) thirty minutes, (*b*) one hour, (*c*) one and a half hours, and (*d*) two hours. The result was that the anthrax spores exposed for thirty minutes to the disinfectant (1 in 100) yielded in sub-culture normal and copious growth both on agar and in broth. The same spores for one hour yielded no growth in broth and a limited number of colonies on agar. After exposure for one and a half and two hours no growth took place. Spores of bacillus enteritidis exposed for thirty minutes yielded good growth. The same spores exposed for one hour yielded a very limited number of colonies. When exposed for one and a half to two hours no

growth was yielded. From these experiments it follows that the hypochlorite of soda used as solution of 1 in 100 had a complete disinfecting power on both anthrax spores and enteritidis spores when acting for one and a half hours; its disinfecting power was limited when acting for one hour, but it had no effect in thirty minutes. This result of the solution of 1 in 100 on spores of anthrax (complete disinfection in one and a half hours) compares most favourably with all disinfectants that I am acquainted with exclusive, of course, of mercuric bichloride.

Series 3.—Hypochlorite of soda used as a watery solution, 1 in 200—i.e., 0·05 per cent. of available chlorine. In this series, also, the time of exposure was (1) for twenty minutes, (2) for ten minutes, and (3) for five minutes. The microbes used were: proteus vulgaris, bacillus coli, bacillus typhosus, bacillus diphtheriæ, bacillus of swine fever, vibrio of Asiatic cholera, and staphylococcus aureus. All these succumbed to the action of the solution after a five minutes' exposure, so that no sub-cultures were obtained in any of the culture tubes. Of course, exposure for ten and twenty minutes respectively had *a fortiori* the same result. On the spores of bacillus anthracis and those of bacillus enteritidis this solution 1 in 200 had practically no effect, as even after exposure for four hours good and copious sub-cultures were obtained.

It follows, then, that on non-sporing microbes the solution of hypochlorite of soda (1 in 200) acts as disinfectant in five minutes. Weaker solutions that I have tried—e.g., 1 in 300 and 1 in 350—required an exposure so long that for practical purposes it must be considered as not applicable, the bacillus coli, and particularly the staphylococcus aureus, exposed to the solution 1 in 300 for three hours yielding in sub-culture good and normal growth. An indication of the positive disinfecting action of the solution of hypochlorite of soda on the microbes in the above experiments is noticeable already by simple inspection of the microbic emulsion. It is this: the emulsion becomes changed from the original turbid into a clear solution; this clarifying action is in proportion, in point of time, to the strength of the hypochlorite of soda solution. Using it in the strength of 1 in 10 its clarifying action is already noticed in from two to three minutes on the emulsion of non-sporing microbes: an emulsion of spores of anthrax is transparent already in ten minutes.

Series 4.—In this series sewage as passed out of St. Bartholomew's Hospital was mixed with hypochlorite of soda. A measured quantity of the sewage (99 c.c.) was put in a glass-stoppered sterile bottle and to it was added 1 c.c. of the disinfectant. Consequently we had here a solution of 1 hypochlorite of soda in 100. The untreated sewage was tested for the number of living microbes contained in it, which was found to be a little under three millions per 1 c.c. After shaking up the 99 c.c. of sewage with 1 c.c. of hypochlorite of soda sub-cultures with three platinum loops per tube were made in broth, on agar, and for anaerobes in deep grape sugar gelatin. The first two were kept at 37° C. for four days and the sugar gelatin culture at 20·5° C. for six days. 1. After thirty minutes all the culture tubes remained free of growth. 2. After twenty minutes there was no growth in the aerobic cultures, but there was one colony in the anaerobic culture; this proved to be a colony of bacillus butyricus. 3. After ten minutes there was copious growth on the agar surface, which proved to be a pure culture of the sporing bacillus mesentericus, but no growth in the broth culture. It follows from this that all non-sporing microbes of the sewage were killed in ten minutes by the addition of 1 c.c. of hypochlorite of soda to 99 c.c. of sewage. Spores, however, both of the aerobic bacteria (bacillus mesentericus) as well as the anaerobic (bacillus butyricus) were not disinfected in ten minutes, but appeared to have been destroyed in thirty minutes. This last result does not quite coincide with the results obtained with the spores directly experimented with in the former series (Series 2), in which 1 in 100 of disinfectant did not harm the spores of anthrax and of enteritidis. The spores of bacillus mesentericus having a greater resisting power to inimical influences (heat and chemical disinfectants) than those of bacillus anthracis, and the latter withstanding the action of hypochlorite of soda, 1 in 100, for thirty minutes, the above result of the apparently successful disinfection of the spores of the bacillus mesentericus in twenty minutes seems at first sight unintelligible. It is, however, explained if we remember that in the experiments with the spores of anthrax (Series 2) three loops of the emulsion would contain an enormous number of spores, while three loops of the sewage may fail to contain a spore of the bacillus mesentericus, this microbe, or its spores, being present far less numerously in the sewage than in our emulsion crowded with the spores of bacillus anthracis.

The addition of 1 hypochlorite of soda to 100 of the fluid is sufficient to devitalise non-sporing microbes in sewage or any similar fluid in ten minutes.

THE ANÆMIA OF RHEUMATOID ARTHRITIS.

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ALTHOUGH resembling most other anæmias in being secondary and symptomatic rather than primary or idiopathic, that of rheumatoid arthritis is none the less interesting. It differs from that of acute rheumatism, the form to which one would probably consider it should most fitly be allied; but in essentials it may be classed with those anæmias seen in other infective diseases.

Turning to the general characters of the anæmia we seldom find it very marked except in advanced and acute cases, but in almost all, even the slightest, there is as a rule a certain amount of blood deficiency. Roughly speaking, I have found it to exist in about 95 per cent. of the cases coming under my care. We rarely find extreme pallor of the skin, the patients rather, as a rule, presenting a sallow or brownish-yellow appearance, with moderate blanching of the mucous membranes. This sallowness is apt by degrees to pass into a deeper shade until it insensibly merges into a distinct discolouration. Not infrequently we find cardiac bruits and venous hum associated with it. Hæmorrhages, so common in other forms of anæmia, are rare but not unknown. They are very rare from the mucous membranes, being most commonly seen as small purpuric spots on the lower limbs. At the present moment I have under my care a woman aged twenty-two years with marked and advanced rheumatoid disease and anæmia, and in whom there has been very considerable hæmatemesis, there being no obvious gastric condition to account for it. On the whole hæmorrhages are rare, and this we understand when it is remembered that they are most often seen in anæmias of more than 50 per cent. blood deficiency, which depend more on a corpuscular deficiency than on that of the hæmoglobin. With regard to observations of others on the anæmia of rheumatoid arthritis we find that Forsbrooke[1] states that in all cases he found anæmia either in an early or in a late stage. He found a diminution in the number of the red corpuscles as well as of their hæmoglobin value, the decrease in the numbers averaging between 77 and 52 per cent., and in their hæmoglobin value between 55 and 25 per cent. Lane,[2] without entering into details of the anæmia, mentions that it is one of the most constant symptoms, but that it has not the appearance of an idiopathic anæmia and that it never assumes a chlorotic form.

On microscopic examination I have found the blood in rheumatoid anæmia to have the following characters: there is a slight but well-marked diminution in the numbers of the red blood corpuscles (4,300,000 to 3,000,000); a marked and greater diminution in the hæmoglobin (from 80 to 40 per cent.), and a slight increase in the number of the white corpuscles. It is thus evident that the hæmoglobin value of each individual corpuscule is lessened, and as a consequence the functional value of the blood as a whole. The percentage increase of the white corpuscles is slight, and seems to have no definite relationship to the percentage of the other constituents of the blood, nor yet, as far as I could ascertain, to the severity of the joint disease. This point, however, I have not yet been able to thoroughly work out. The blood shows red corpuscles of varying size and varying shapes, but does not present any microcytes (Eichhorst's corpuscles), or yet any nucleated corpuscles. The hæmoglobin would not only appear to be less in quantity in each cell, but to be

[1] Forsbrooke: Dissertation on Osteo-arthritis.
[2] Lane, H.: Rheumatic Diseases—so-called.

also in a less stable union with the cell stroma. It crystallises out more readily and is more easily acted upon by such substances as common salt, acetic acid, or sulphate of soda in solution. Sometimes there is difficulty in distinguishing between a swollen red cell with its hæmoglobin dissolved out and a white cell. This may account for the variability in the estimation of the latter.

The points of interest are the diminution of the hæmoglobin and in a lesser degree the increase of the white corpuscles. According to Osler we have three classes of anæmia:—1. Those in which the percentage of hæmoglobin in each corpuscle remains the same and the percentage of colouring matter corresponds to the percentage of the corpuscles. As an example we have the anæmias due to hæmorrhage or to some organic disease. In this connexion we may note that both Laker[3] and Mackenzie[4] point out that in malignant disease the hæmoglobin value is decreased, and the former states that from this fact alone one can diagnose between malignant and benign conditions. 2. Those in which the hæmoglobin is reduced out of all proportion to the reduction of the corpuscles so that the individual value of each red corpuscle in colouring matter may be greatly lowered. As an example we have chlorosis. 3. Those in which the hæmoglobin percentage is increased, and in which therefore the anæmia is not so great as the reduction of the corpuscles would appear to indicate. As an example we have pernicious anæmia.

In rheumatoid arthritis, then, we have to do with an anæmia belonging to the second class—in fact, a pseudo-chlorosis or oligochromæmia. We must now ask ourselves why in one form of anæmia the hæmoglobin value should be lessened and in another increased, and in yet another that it should remain normal? In the latter case it is probably due to hæmorrhage, whereas in the others it must arise from some abnormal condition having a direct influence on the blood-cells and their contents. We know that anæmia implies a want in the adjustment between the daily gains and losses of blood—defective hæmogenesis or excessive hæmolysis. The former may depend on deficiencies in quantity or quality of the food; insanitary surroundings or mode of life; some defect, inherited or acquired, in the hæmopoietic viscera, &c.; and the latter on fever and inflammation or to the presence of deleterious substances in the blood. With defective hæmogenesis in this disease we have nothing to do at present, as it would appear that in this, as in most other anæmias of a similar nature (the hæmoglobin loss being greater than that of the cells), the anæmia is due to destruction of the red cells and their contents by the presence of some substance harmful to their existence circulating in the blood. Dr. Hunter[5] says blood destruction is of two kinds: (1) *passive*, which is the ultimate destiny of the red corpuscles, and which, being a process of natural decay, is evidenced by the presence of pigment in the spleen, liver, and bone-marrow; and (2) *active*, in which form the hæmoglobin escapes from the corpuscles into the plasma and is in great part excreted by the liver as bile pigment. In health no trace of this breaking up or excretion of free hæmoglobin is found, but in such a disease as pernicious anæmia there is abundant evidence of it in the liver cells. This has, moreover, been found not only in pernicious anæmia, but also in malaria and as the result of certain poisons which have the power of causing the disintegration of the blood. Now, this destruction would not appear to take place so much in the liver as one would expect as in the spleen, and to a less extent in the portal capillaries of the gastro-intestinal tract. This Hunter has demonstrated by many beautiful experiments. He found that almost all hæmolytic process was stopped by the removal of the spleen whilst experimenting with toluylendiamin. From this it would appear that the chief function of the liver is the disposal of the products of hæmolysis. He further states that certain substances such as toluylendiamin act on the blood indirectly and depend for their effect on the action of certain cells and especially of those of the spleen, whereas such substances as pyrogalic acid, glycerine, distilled water, &c., act directly and their action depends on the quantity injected. This, however interesting and significant, does not explain why in one case a bacterial poison should produce an increase in the hæmoglobin value whilst in another diminish it. It is of course possible to suppose that each individual poison possesses a selective action and that each has the power to pick out one blood constituent for special destruction. That this is possible we may suppose from what is known of the action of bacterial poisons in general. I am, indeed, inclined to think that in certain diseases in which the cause seems similar yet the individual poisons produced may have different chemical properties. Have we not ptomaines and leucomaines, and may not their effects on the blood cells and their constituents be quite different? Let us look at what happens in the following diseases. 1. In rheumatism we have an acute disease most probably due to an infective organism or poison, as Newsholme argued in the Milroy Lectures for 1895,[6] and in which Garrod[7] finds a loss of red corpuscles with a corresponding loss of hæmoglobin, the corpuscle value remaining constant. In some cases during the course of the disease there may be a tendency to a decrease in the corpuscle value of a transitory nature, and this may become marked during convalescence leading to a more or less permanent anæmia. This anæmia, we see, differs from that of rheumatoid disease in that the hæmoglobin percentage in the case of acute rheumatism is not decreased. It is only in the more chronic cases that we get an approach to the type seen in rheumatoid arthritis. 2. In post-malarial conditions, a disease primarily also due to infective organisms (plasmodia), we have, according to Surgeon Evans,[8] a reduction in the number of red corpuscles and also of the hæmoglobin—the loss of the latter exceeding that of the former. He found no change in the numbers of the white corpuscles. Mannaberg,[9] and Kelsch and Kiener[10] all recognise this, and the former suggests that it is due to the parasitic poison dissolved in the liquor sanguinis dissolving out the hæmoglobin. 3. Pernicious anæmia due, according to Hunter, to bacterial poisons acting on the blood in the portal capillaries and causing an anæmia in which there is an increase in the hæmoglobin value of the individual corpuscles. I take it that in the two former diseases the bacteria do not cause the anæmia (I am here excluding the direct action of the malarial plasmodia on the cells), but that their products do. If I am correct in my supposition we have, then, three diseases in which there is anæmia, all caused (as far as we at present know) by the same class of poisons, yet giving very different results. According to Cohnheim[11] certain substances, such as snake poison (probably an albumose), have the property of dissolving the blood corpuscles, setting free the hæmoglobin; and Maragliano[12] states that there are certain pathological conditions in which the blood serum exercises a destructive influence upon the red cells, which causes them to give up their hæmoglobin to the menstruum, and that it then disappears from the blood. From these facts might not one draw conclusions pointing to two different classes of poisons having different effects? May not the basic chemical products (ptomaines) simply have an effect on the red cells without dissolving out the hæmoglobin, whilst others (the toxic albumins or albumoses), having the property of a ferment, dissolve out the hæmoglobin as well as destroy the cell? In support of this are the observations, already referred to, of Cohnheim, Maragliano, and Mannaberg.

The increase in the white corpuscles is of interest as it is found in most infective conditions, and according to Hunter[13] the increase is roughly proportional to the severity of the disease. Habershon[14] says he has noticed an increase not only after the introduction of alkaline carbonates, but also from the presence of toxins in the blood. Should the bacteria themselves be present in the blood the destruction of the red cells will probably be greater and occur earlier than when their products only are present and the increase in the number of white corpuscles will also be greater.

In the present state of our knowledge one does not like to dogmatise, but it appears to me that bacterial and allied poisons do act on the blood, in one case affecting an increase, whilst in yet another a decrease in the hæmoglobin value, and that this is due either to an inherent selective action in the poisons themselves or to a difference in

[3] Laker: Centralblatt für die Medicinischen Wissenschaften, 1887, p. 405.

[4] Mackenzie: Brit. Med. Jour., 1891, vol. i.

[5] Hunter: Brit. Med. Jour., 1889, vol. ii.

[6] Newsholme: THE LANCET, March 16th, 1895, p. 661.

[7] Garrod: Brit. Med. Jour., 1892, vol. i., pp. 331 and 1139.

[8] Evans: Brit. Med. Jour., 1891, vol. i., p. 796.

[9] Mannaberg: Malarial Parasites (New Sydenham Society), p. 384.

[10] Kelsch and Kiener: Traité des Maladies des Pays Chauds, p. 545.

[11] Cohnheim: Lectures on General Pathology (New Sydenham Society), vol. i., p. 474.

[12] Maragliano: Berliner Klinische Wochenschrift, Aug. 1st, 1892.

[13] Hunter: Brit. Med. Jour., 1892, vol. i., p. 1139.

[14] Habershon: Brit. Med. Jour., 1892, vol. i., p. 1139.

the chemical composition of these poisons. This question it has not yet been possible to work out, and for the present I must rest content to have drawn attention to the problems involved and on which so much may turn. With regard to rheumatoid anæmia it corresponds to that seen in malaria—the probability being that it is the toxins circulating in the blood which by their solvent action on the hæmoglobin induce the deficiency and not the destructive action of the bacilli themselves on the cells.

Bath.

BLOOD AS A THERAPEUTIC AGENT.

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THE therapeutic effects of the withdrawal of blood from the body in various diseases, as well as the periodic "bloodings" of the healthy, in days gone by were esteemed of great value; indeed, there were very few ailments which came under the care of the physician up to the early part of this century which were not considered as requiring this vascular depletion, and doubtless in some cases the effects were very beneficial. But when the recoil of the spring came and bleeding went out of fashion no attempts were made to cure diseases, so far as I am aware, by the administration or injection of blood, unless in some cases of anæmia after hæmorrhage or in pernicious anæmia, when transfusion was occasionally practised; indeed, I do not think that even in more recent times blood has been very seriously considered as a medicinal agent; and when an occasional writer has ventured to extol its merits as a specific for scrofula or as a remedy for anæmia, either the disagreeable ideas associated with the taking of it or some other objection has cropped up and it has fallen very quickly into disuse.

As a medicine blood seems first to have been employed by savage races, some of whom we read of as drinking their enemies' blood in order to imbibe the courage which they imagined to be contained in it, an idea which, perhaps, gave rise to a custom alluded to by Southey, who stated that "there was a water of man's blood which in Queen Elizabeth's day was a new invention, whereof some princes had very great estimation, and used it for to remain thereby in their strong force, and, as they thought, to live long." They chose a strong young man of twenty-five, dieted him for a month on the best meats, wines, and spices, and at the month's end they bled him in both arms as much as he could "tolerate and abide." "They added a handful of salt to six pounds of this blood and distilled it seven times, pouring water upon the residuum after each distillation. An ounce of this was to be taken three or four times a year. As the life was thought to be in the blood it was believed it could be thus transferred." Some races have used blood as a medicinal agent proper[1]—for instance, the aborigines of the River Darling, New South Wales, used to feed the sick upon blood drawn from their male friends, who willingly bled themselves copiously to provide it for the patient, and it was taken either raw or slightly cooked by putting hot ashes into it.[2] In civilised countries various isolated attempts have been made to utilise blood as a remedial agent—for instance, Mauthner of Vienna in 1850 recommended it highly as a tonic in the chronic anæmia of children which followed chronic diarrhœa, typhus fever, or severe pneumonia, or when it resulted from long-continued suppuration or from scarlatinal nephritis, but he regarded it as powerless if a tuberculous diathesis existed and in the marasmus of new-born infants.[3] It is interesting to note that he prepared the ox blood by passing it through a sieve and then evaporated it to dryness (but with no precautions as to temperature), and gave from twenty to sixty grains of the residue for a dose. Other writers have advocated blood as a remedy for anæmia—for example, Silbermann of Breslau in 1885 published cases of severe anæmia treated successfully by subcutaneous injection of defibrinated blood,[4] and we are all acquainted with the excellent results which are now and then obtained by giving desiccated blood by rectal injection in some cases of severe anæmia which have resisted the use of arsenic and iron.

As a food blood has frequently been advocated, and in the days when it was regarded as a waste product at the abattoirs—i.e., before its value for sugar refining, &c., became known—many suggestions were made for its introduction as an article of diet.[5] Scientific writers deplored the waste of so richly nitrogenous a material, and in France and America for some time it was ordered as a stimulating and strengthening nutrient by physicians and was taken hot and frothing at the abattoirs by debilitated and phthisical persons for much the same purpose that we would order them to take cod-liver oil and iron. The disagreeable nature of this treatment, however, was obvious, and one would imagine that a person would require to have a strong stomach even to contemplate it, much less to carry it into practice, and in consequence of this Vacher[6] in 1875 recommended that instead of blood itself the serum separated from the coagulum would prove valuable, firstly, because the idea of taking it was less disagreeable, and secondly, because he thought the effete matters were less liable to be contained in the serum than in the unseparated blood. His attention was directed to blood serum by the circumstance that journeymen butchers commonly regarded it as a cooling medicine or laxative, as a pick-me-up, and as a remedy for ascarides and tape-worms and for scrofula, and it was in these very conditions that Vacher himself found its administration to be followed by good results.

Such, then, are the principal diseases for which blood has been given in the past—anæmia, debility, phthisis, scrofula, and intestinal worms—and it has been employed as a laxative, as a stimulant, and as a substitute for cod-liver oil and iron. As an article of food it has been used chiefly in France,[7] where it has been made into soups, &c., and in Switzerland, where they used to bake a bread with equal parts of blood and water instead of simple water.[8] Laplanders, again, are said to have filled bladders with the blood of their deer and to have preserved it for future use by keeping it at a low temperature.[9] The black puddings which are still considered a delicacy by some, and which consist chiefly of pig's blood, illustrate a modern use of blood as a food.

Of the nutritive value of blood I need hardly speak, but may perhaps be allowed to mention that it has been stated that if the nitrogen excreted be compared with the amount of nitrogenous material ingested (the difference being approximately the amount assimilated) in a diet consisting of defibrinated blood as contrasted with one consisting of ordinary flesh, &c., the metabolism and assimilation are said to be increased by a blood diet, and therefore it has been recommended for sick and delicate persons.[10] It is not my intention now to deal with any of the matters which have occupied the minds of past observers with reference to the therapeutic actions of blood, for having in view the modern discoveries which have been made with reference to the pathogeny of some chronic diseases, which owe their origin to a depraved or altered condition of one or other of the so-called internal secretions, the possible value of blood which is normal in composition and which probably contains all of the internal secretions in its serum must be apparent.

Some years ago I published a paper entitled "The Inhibitive Functions of Glandular Secretions in Some Chronic Diseases,"[11] and explained that the impression had fixed itself in my mind that there must be some controlling influence which regulates the proportion which any one tissue constituent in the body bears towards the others, and I pointed out that there are several diseases in which the outstanding pathological feature consists in an overgrowth of some one tissue element, which, so to speak, chokes its neighbours, causing their atrophy and disappearance. I gave as an example pseudo-hypertrophic paralysis and explained the reasons which prompted me to use thymus gland in that disease (the age limits of thymus activity and of the disease being the same), and I still believe that the thymus secretion when normal in some

[1] See p. 1581 of our present issue showing the practice to exist among other than aborigines in New South Wales.
[2] Ibid., p. 35.
[3] Medical Times and Gazette, 1853, vol. ii., p. 599. Vide also Archives Générales de Médecine, 1854.
[4] THE LANCET, Dec. 5th, 1885.
[5] THE LANCET, 1867, vol. i.
[6] Serum Sanguinis as a Therapeutic, by Francis Vacher, M.D. &c. Liverpool and Manchester Medical and Surgical Reports, 1875-76.
[7] Medical Times and Gazette, 1868.
[8] Annales d'Hygiène Publique, Chavallier, 1871.
[9] Ibid.
[10] THE LANCET, Nov. 13th, 1881.
[11] Brit. Med. Jour., April, 1893.

way controls the growth of the fibrous constituents of the muscles. I may say, in passing, that my experience of the administration of thymus has been that it improves the condition of pseudo-hypertrophic paralysis up to a certain point and seems to arrest its progress, but it does not cause the re-absorption of fibrous tissues already fully formed and cannot be said to cure, but I would regard it as of great importance to give thymus and to persevere with it especially in any early case of the disorder.

The Home for Incurables at Liverpool serves to keep constantly before one a number of diseases which are in all probability due to the perversion of one or other of these controlling ferments. At all events my theory concerning the nature of these secretions is the working hypothesis upon which my practice is based, and which has led to my using the organic extracts very extensively. But it will be readily understood how difficult it is to find a guide as to which ferment one should employ in any given class of cases. There are sometimes concomitant symptoms or antecedent ones which help to give a clue in the matter, but it is almost impossible in the majority of cases to say whether such symptoms are not due in some way to the very condition which is about to give rise to the subsequent disease. Take osteo-arthritis for example—a complaint in which there is a hyperplasia of the cartilage cells, many of which come to fill the capsules in the matrix (which should only contain two or so), and at length, pressing upon the matrix they give rise to its gradual absorption and disappearance. This disease is often preceded by uterine or ovarian disturbance, and sometimes it follows removal of the ovaries and appendages by operation in young women. But it is not by any means a constant sequel of that operation, so that although there seems to be some relationship between the ovaries or their neighbours and the disease, we cannot definitely connect the one with the other. However, all kinds of ovarian and Fallopian extracts have been given without any good results. The maculation of the skin which occurs in the early stages of the disease might, perhaps, lead one to think that the suprarenal extract might be of service, although I do not think it has ever been tried.

Now it was after trying several of the organic extracts in this osteo-arthritis that the idea occurred to me about two years ago that the blood must of necessity contain the secretions of the various ductless glands and that, perhaps, its administration might prove useful, so I communicated with Messrs. Burroughs, Wellcome and Co., and asked them to prepare for me a blood residue by evaporating ox blood in vacuo at a temperature not exceeding 100° F., and I requested them to estimate at the same time the amount of residue obtained from a given quantity of blood, and was surprised to hear from them that each quart derived from the jugular vein rendered from nine to eleven ounces of dry residue. This they compressed into tabloids, and we called it the Residuum Rubrum for want of a better name. This preparation has, during the past eighteen months or more, been given regularly to several osteo-arthritic patients and I think I may say that in some of them at least the improvement has been most marked. I may here shortly recall a couple of cases to illustrate this.

CASE 1.—The patient, a woman, first became affected with arthritic changes about five years ago, and in the course of two years her shoulders, wrists, knees, elbows, and the metatarso- and metacarpo-phalangeal joints and the cervical joints had all become involved in spite of the usual applications and massage. She was treated by the baths at Buxton and Bath, hot-air baths, &c., and the internal administration of cod-liver oil, arsenic and iron, until at length, about eighteen months ago, she became so crippled as to be unable to dress herself or even to feed herself, and it was with great difficulty and pain that she could be got out of bed for a few hours each day. In June, 1895, she was put upon sixty grains of the venous residue a day, and in the course of six months had so far improved as to be able to move her elbows, neck, and fingers freely, and later the knees and ankles also improved greatly, and were it not for shortening of the hamstring tendons I think she would be able to walk a little. Her pains, which formerly were very severe, are diminished. She can now brush her hair, feed herself, place either hand on the top of the head and can do some sewing. Furthermore, her knees, which were formerly rigidly flexed and extremely painful, are now quite free from pain and can, as previously mentioned, be moved freely and painlessly, but they cannot be perfectly extended, so that she cannot stand. The general health of this patient is not very good owing to a slowly progressing phthisis, so common in cases of osteo-arthritis.

CASE 2.—A woman aged about twenty-nine years has been under my care for six years at the Home for Incurables, Liverpool. The disease for several years progressed steadily, though slowly, the joints of both upper and lower extremities becoming early involved. She was obliged for some time to go about on crutches, but about three years ago—like the previous case—she became crippled, the movements of her knees becoming very restricted and, to a lesser extent, those of her upper extremities, although she has always remained able to feed herself and to do a little crochet work. The pains in the knees, the metacarpo-phalangeal and the phalangeal joints were for long very severe and were never permanently relieved by any of the usual remedies. The administration of the venous residue was commenced nine months ago and the results have been fairly satisfactory. The first thing noted was a gradual diminution of the pains and of the creaking in the various joints. The knees and fingers certainly became more mobile, and they are now less swollen than they have been since she has been under observation. There are in this case subluxations of the metacarpo-phalangeal joints; hence perfect recovery of these parts would not be possible.

There is yet another question to settle with reference to the administration of blood, and I would here like to point out how suggestive some clinical experiences may be of the ways and means of treating cases by these new remedies. For instance, it is generally believed that when the blood passes through the lungs the corpuscles alone are influenced by the oxygen. Truly they probably alone take up the oxygen and carry it to the tissues to part with it again; but is there anything to prove that there are no elements in the serum which require to be oxidised as they pass through the pulmonary capillaries? Some time ago I was called to see a man suffering from acute Bright's disease who was deeply comatose from uræmia.[12] Plenty of air seemed to be entering his chest, but he was somewhat livid (the internal respiration being imperfect) and he had pin-point pupils. There was some element in his blood which was acting as a narcotic and which was surely and quickly killing him. So comatose was he that the most powerful stimulus could elicit neither evidence of sensibility nor of reflex excitability, but the inhalation of pure oxygen quickly altered the state of affairs, and within a very short time from the commencement of its administration he was conscious and able to sit up in bed and his pupils dilated somewhat. He remained blind for some days. Efficient oxidation of some chemical product contained in his blood serum (probably a waste product) had destroyed the narcotic character of the poison, and by repeating the inhalations until the powers of elimination were restored the man made a complete recovery. Now, does not this case suggest that the serum contains matters capable of oxidation and that perhaps, if this is so, the internal secretions, which, so far as we know, are poured into the veins, may require to be subjected to the influence of oxygen before they are rendered fully active? It is almost certain that they are absorbed by the capillaries and, therefore, must of necessity pass through the lungs with the venous blood in order to reach the arteries and be distributed to the tissues. This impression led me some months ago to commence giving the residue obtained from carotid blood, and it is an interesting fact that the amount of residue obtained from the evaporation of arterial blood is less than that rendered by evaporation of an equal quantity of venous blood by about two ounces per quart, a quart of the former leaving seven ounces, whereas the latter yields from nine to eleven ounces; and it is to be observed also that the physical characters of the two residues are somewhat different, the venous residue being a fine, light-brown, cocoa-like powder and the arterial much darker in colour and finely granular in consistence.

The arterial blood has been given for too short a period to allow of my making any remarks concerning the results of its administration, but I have ventured to throw out these few suggestions regarding its possible value as a therapeutic agent, and shall hope at some future period both to hear the experiences of those who may care to experiment with it and to relate my own if they seem worthy of any further comment.

In conclusion, I should just like to mention that bone

[12] THE LANCET, Dec. 7th, 1895.

marrow is very valuable in the treatment of some cases of osteo-arthritis, and that one patient treated exclusively with it has recovered the movements in all her joints. She cannot, however, fully extend her knees owing to shortening of the hamstrings, long contracted when the knees were rigidly flexed. The knee is perfectly moveable, and I believe would be as useful as ever if the restraining muscles were stretched or their tendons cut, but unfortunately she will not allow either measure to be taken.

Liverpool.

INCISED WOUND OF THE INTERNAL AND EXTERNAL PLANTAR ARTERIES.

BY ROBERT TURNER, M.A., M.B., C.M. ABERD., F.R.C.S. EDIN. (ELECT.)

A WOUND of the internal and external plantar arteries is, I think, of sufficiently rare occurrence to be worth recording in the pages of THE LANCET.

The patient was a girl aged eleven years, the daughter of a travelling tinker, who was brought to me on the afternoon of Sept. 8th last suffering from the above condition in the right foot. A few hours previously she had jumped from the top of a high fence down upon some broken bottles which were partially concealed by grass. She instantly saw the blood gushing from the sole of her foot and ran to her mother, who applied a scarf as a tourniquet above the ankle. The wound was then covered with tobacco leaf and the whole foot bound tightly with dirty rags. These were found to be soaked with blood, and the mother stated that there was much blood lost before she was able to do anything. When the mass of dirty dressings was removed and the part cleansed as far as possible an irregular wound was found of considerable depth, extending across the sole about the junction of the posterior third with the anterior two-thirds. It was roughly horseshoe-shaped, forming a thick flap with the base towards the heel. From long application of the improvised tourniquet the whole foot was cold and almost anæsthetic, so that manipulation was for a time nearly painless. When the tourniquet was slackened blood spurted out from the inner angle of the wound (the internal plantar) and also with greater volume and force from the face of the flap near the outer angle (the external plantar). It was thus an easy matter to seize and tie the latter vessel. The end of the internal plantar was not so readily to be recognised. With the aid of the mother the foot was firmly grasped and the bleeding "point" seized *en masse* with a Greig-Smith forceps by passing it into the wound in an upward, backward, and inward direction and twisting it several times. Fortunately the vessel was included in the grasp of the forceps, for the hæmorrhage now ceased. This obviated enlarging the wound further. It is quite possible that by this latter procedure the cut end of the internal plantar nerve was seized also and twisted. At any rate, it was the only part of the operation that caused any pain. The wound was then cleansed with carbolic lotion and packed with gauze to prevent oozing, which was now getting rather profuse owing to the free anastomosis in this part of the foot. Healing by first intention was, of course, out of the question. The usual dressing with a compression pad and bandage was then applied. Neither of the two chief nerves could be detected, although they must have been cut. The flexor longus digitorum tendon had retracted out of sight and the skin and plantar fascia seemed to keep the edges of the wound considerably everted.

It may be said that simple compression would have stopped all hæmorrhage in this case, but, seeing that the patient would be out of reach in a few days, the method adopted was, perhaps, the safer, though more painful in the absence of an anæsthetic. On the fourth day there was no recurrence of hæmorrhage, but there was a slight discharge of pus. It is often surprising how readily and effectually gipsies can act in an emergency such as the above.

Turriff, N.B.

THE HÆMATOZOON OF MALARIA AND ITS DISCOVERY IN WATER AND SOIL.

BY SURGEON-CAPTAIN PATRICK HEHIR, M.D. BRUX., F.R.C.S. EDIN., D.P.H. CANTAB., F.R.S. ED.,
LECTURER ON PATHOLOGY AND MEDICINE IN HIS HIGHNESS THE NIZAM'S MEDICAL SCHOOL, AND ON CLINICAL MEDICINE AT THE AFZUL GANJ HOSPITAL, HYDERABAD.

1.[1] IN the year 1892 I published a *brochure* entitled "Observations on the Hæmatozoon of Malaria," which contained many statements opposed to the malarial pathology of recent times. The opinions on the work as expounded in the reviews that followed its appearance were expressed with caution and reserve, but with that open-mindedness that has always been one of the laudable characteristics of the scientific medical press.

2. Since that time I have worked uninterruptedly at the subject in one of the most malarious parts of Southern India. In my original monograph I endeavoured to give the life-history of the various parasitic forms met with in malarial blood; and I referred to having met with certain sporozoa in water which presented features somewhat similar to the malarial parasite as met with in human blood. In the present paper I propose to give a *résumé* of the conclusions arrived at as the result of three series of investigations in the same connexion. This will include in the first place some remarks on the materials employed, and the nature of the cases, and the way in which these new phases in the life-history of the parasite were ascertained. This is followed by a description of the parasitic forms met with in malarial blood and those met with in water, incidentally remarking on the peculiarities and functions of the parasite, and the question of the unity or plurality of species. As there are several forms included which have not been described or even mentioned by other writers, and other forms which, although described by previous workers, are here differently interpreted even as to their origin, these have been specially dealt with.

3. My practical acquaintance with the plasmodium malariæ was made in Burma in the year 1887, when I observed certain peculiar moving bodies in the blood of sepoys returning from Wonthoo to Mandalay after an expedition to that portion of Upper Burma. At that time, whilst on field service, having nothing but dry objective lenses with me, I was unable to advance much in these investigations; but late in the same year, on arrival in Hyderabad, finding a practically unlimited field for these observations, I re-commenced the work with a certain degree of enthusiasm, which grew progressively, as the proof to my mind regarding the etiological relationship between the hæmatomonas malariæ and malarial diseases became established.

4. The special object in view, however, was to endeavour to verify or refute the observations made by different observers—Laveran, Marchiafava, Celli, Councilman, Sternberg, Osler, Vandyke-Carter, and others. For six years I worked on the same lines as these distinguished pathologists, but in 1892 I formulated a new line of investigation, which has, I believe, yielded more satisfactory results.

5. *Method of investigation adopted.*—The following was the method of preparing the blood for examination in the majority of cases and its adoption can be recommended as giving good results.

6. The finger from which the blood is to be removed is to be thoroughly washed with soap and warm water. This removes dirt and loose squamous epithelial scales and dilates the cutaneous capillaries. Next the finger is washed in methylated spirit and thoroughly dried. No string round the finger is necessary. The finger (middle one preferred) is directed downwards, held pretty firmly, the blood being pressed towards the end of the flexor aspect by the investigator's thumb, and a smart prick made with a clean needle; the sharper the needle the less pain felt by the patient. A straight surgical needle is very good in this respect. The washing process should be carried out in one's presence. Every precaution should be taken to conduct this stage with perfect cleanliness.

[1] The numbers have been attached to the paragraphs by Surgeon-Captain Hehir to render references to the paper easy of verification.

7. In the examination of fresh blood, after the puncture has been made, the drop of blood is allowed to ooze freely without any squeezing or pressing of the finger. A bacteriological (specially thin) slide is brought into contact with the centre of the drop; the slide should barely touch the drop of oozing blood. A cover slip is allowed to fall gently on the slide. Too much pressure of the cover-slip against the slide causes the red blood cells to run together rapidly. What is necessary is that the layer be thin and uniform, and the red blood corpuscles, if possible, seen singly. The blood rapidly diffuses as a thin film and as a rule should be at once examined in the fresh state—that is, whilst the blood is still living. Occasionally, however, especially when there are many rouleaux of red blood corpuscles, it is advantageous to wait for five or ten minutes, so as to allow the component red blood corpuscles of the rouleaux to separate. As a rule after a period of half-an-hour, unless special precautions are taken to exclude air and prevent evaporation by properly cementing the preparation, the corpuscles run together, thus rendering accurate observation unsatisfactory, although in most preparations some portions of the slide may be watched for several hours and observations distinctly made.

8. If any characteristic or peculiar forms of the parasite are found in the slide preparation so obtained, a few stained cover-slip specimens should be sealed with zinc white or Hollis's glue. If we have obtained only a few slide preparations and cannot get further samples, and the preparations turn out to be specially good ones, it may be advantageous to know that the fresh specimen may be fixed and stained after raising the cover-slip from the slide with the sharp blade of a penknife. This is much better than sliding the cover-slip apart from the slide, which latter, of course, cannot be done if any marginal cement has been used.

9. *Precautions necessary in the examination of the blood.*—The slides and cover-slips should be thoroughly cleaned and kept in methylated spirit or clove oil till about to be used. All fluids, particles of dust and dirt, and the lines, particles, and débris left by dirty cloths used in wiping the glasses, add their quota to complicate matters. Scales of the surface epithelium from the fingers are often present and are not very dissimilar to the large pigmented endothelium-like cells sometimes found in malarial blood. The least amount of gentle pressure on the cover-slip is advantageous by forcing some of the blood towards the periphery, where a layer of fibrin accumulates and coagulates and thus prevents speedy evaporation, thereby facilitating prolonged examination without the aid of any cementing material. In this layer of plasma the organism sometimes lives for several hours, and in a few instances I have seen the small free amœboid bodies moving in it as long as twenty-four hours after withdrawal. Neither too small nor too large a drop is to be taken; if the drop is too small the film dries up too rapidly and thus causes cessation of movement. About a quarter of an ordinary drop is required for each cover-slip.

10. The highly elastic character of the red blood corpuscles permits of their assuming various forms under varying amounts of pressure, and as each change in shape is associated with a different degree of refrangibility in the cell, every conceivable form may be visible under these conditions. This precaution would not have been expressed were it not for the confusion created by the multiform character of the corpuscles under this condition.

11. *Nature of cases investigated.*—The registered cases were chiefly those of sepoys and bandsmen in His Highness the Nizam's regular troops admitted into the staff hospital, members of the staff of the Chadarghat municipality, and cases from the civil population. Regarding the sepoys and bandsmen it may be interesting to note that they live in the Staff Lines, a notoriously unhealthy locality, and one always spoken of as "very malarious." Further, the sepoys were chiefly "pioneers," constantly employed in road-making and in earth excavations. From the nature of their work the municipal servants were constantly employed in the most insalubrious parts of the municipal area.

12. As each case presented itself a brief history of his illness, together with notes as to his present condition, was recorded. All the cases with the exception of those specially alluded to hereafter were taking quinine at the time or had been taking it up to the period they were brought under observation.

13. During the nine years these investigations continued no fewer than 7250 slide-preparations of malarial blood were examined—4770 fresh and 2480 stained. I possess drawings illustrating the combined results of the three groups of investigations, from 94 cases systematically and daily examined from the date of admission into hospital to that of discharge "cured." As a rule, four slide and two cover slip preparations (for staining) were made from each case at the time of the observation. The amount of labour represented in these investigations may thus be gauged. Notes, which were dictated to my assistant regarding each observation, we made at the time and drawings when necessary were at once made, usually with the aid of Zeiss's "Zeichenprisma."

14. During the course of these investigations the blood of 619 cases was examined. In 94 cases the blood was examined daily and systematically from a minimum period of three days to a maxium period of thirty-one days. The average duration of each of these 94 cases under observation was 9·5 days. Of the 94 cases, 85 were instances of quotidian ague, 7 of tertian, and 2 of quartan. In the other 525 cases, from 1 to 19 observations only were made. All the 94 were selected cases. Of the 525 cases 102 were chosen because they presented the typical clinical characteristics of the different forms of malarial fever. Of these, 89 were quotidian, 9 tertian, and 3 quartan. The rest were cases that came under observation accidentally, or such as presented themselves for examination every now and then, and of which no regular record could be kept. In every case much care was taken in the first examination of the blood to note all departures from the normal. On the 223 cases 8 were typical examples of the malarial cachexia. On 162 occasions intermittent fever in one or other stage was present at the time of making the examination. Although these cases are not registered, as they usually only attended casually for treatment, I am indebted to them for much valuable information. In the 94 systematic cases observations were made both during the pyrexial period and during the apyrexial intervals. In only 7 of these was hypertrophy of the spleen absent. Of the 525 cases, enlargement of the spleen was present in 396, enlargement of the liver in 37, and enlargement of both liver and spleen in 22 cases. Anæmia was well-marked in 81 cases, slightly in 40 others.

15. Eight cases proved fatal, 3 from intercurrent maladies, 2 from diarrhœa, 1 from abscess of the liver, 1 from hæmaturia, and 1 from intestinal hæmorrhage; 3 from general exhaustion supervening on malarial cachexia, and the last succumbed to a supervening attack of acute pneumonia. In 45 cases the results as regards the presence of the more mature forms of the malarial organism were negative. Cases were examined just before, during, and after the paroxysm and for several succeeding days, whilst 18 cases were examined hourly for six hours before, and the first six hours during, the attack of fever.

16. The morphology and developmental processes in connexion with sporozoa invading the blood of man and the lower animals can only be successfully investigated by prolonged, patient, and repeated observation of the parasite during the various phases of its existence, supplemented by the careful and systematic use of appropriate stains. It is almost unnecessary to state that most of the sporozoa are for the greater part of their existence so transparent that the bright light needed for the combination of lenses of the immersion system passes through them without defining the objects we are in search of. Some, of course, are not so difficult of observation; such, for instance, is the case with the trypanosomata in the blood of birds, the hæmatomonads of rats, &c.

17. Indeed, it may be said that the difficulty which even the trained observer experiences in following out the life-history of these parasites depends to a considerable extent upon this characteristic of transparency. It may, therefore, be taken for granted that it is impossible to trace out all the peculiarities of the malarial parasite in fresh specimens, a statement the truth of which is borne out by the present meagreness of our knowledge in connexion with that parasite. The same may be said with regard to the hæmatozoon of cholera, the very existence of which is almost unknown to the profession.

18. Until recently we were particularly wanting in the means of defining in fresh specimens the various fine flagellated processes; the presence or absence of cyst-walls and the hyaline and transparent contents of various cysts which are also difficult to see in nuclei and nucleoli; the early stage of sporulation; recognition of the forms and characters of minute bodies discharged from certain globular cells in combination with a more or less homogeneous fluid, which does not mix with the liquor sanguinis;—these and

other particulars, in the absence of which it would be impossible to arrive even at an approximately correct conception of the nature of the sporozoon under consideration. These circumstances demand from the microscopist both a knowledge of the use of stains as well as the methods of their employment throughout researches of this description. More than half the work of these investigations has to be carried out with stains, and without them it is absolutely impossible to complete such researches. The enormous aid which they afford us is admirably shown by the employment of such stains as do not interfere with the structure, constitution, or functions of these parasites in any way, while they enable us to avail ourselves of all the properties of the pigment as a staining material.

19. I was particularly impressed with the value of staining fluids for this purpose when investigating the malarial organism in marsh waters, and I believe it is a method capable of being more widely employed than at present with advantage.

20. I would incidentally remark that I have received much help from the use of weak solutions of warmed Löffler's alkaline staining fluid added to fresh moist preparations of malaria and cholera blood. In combination with osmic acid vapour it is invaluable. Anyone who has not already carried out examinations of malarial blood with these will be both surprised and gratified at the results obtained.

21. Another important supplementary part of these examinations consists in the use of fixing agents on fresh preparations, especially osmic acid.

22. I would now enter upon a brief description of the various methods of staining adopted. Before doing so I might for the benefit of the tyro in blood examinations state that to acquire anything beyond a mere theoretical knowledge of the subject he will have to spend many days in familiarising himself with the different fixing and staining solutions that are employed in examination of malarial blood. The time spent in this way, however, is not wasted, for when he has acquired a certain degree of facility in the use of stains and learnt their effects produced on the blood cells and these hæmatozoon he may consider that his path has been smoothed. After employing the various ordinary solutions recommended he may endeavour to seek out some new combinations. Assuming that these experiments with new stains are diligently conducted, the young worker will be amply repaid by the beautiful effects he will find himself producing. The most valuable preliminary aid is the recorded experience of the best workers in this special field of research. He will find most valuable assistance in consulting such works as Lee's "Microtomist's Handbook"; Stricker's "Pathological Histology"; Halliburton's "Pathological and Physiological Chemistry," Heitzmann's "Histology"; Bizzizero's "Pathologie du Sang"; and Löffler's "Parasitic Protozoa of the Blood"; amongst works specially devoted to malarial organisms he will find the following very valuable: Mannaberg's "Parasites of Malaria" (New Sydenham Society's Translation, 1894), Laveran's "Paludism," and Thayer and Hewetson's "Researches on the Malarial Parasite" (Johns Hopkins Hospital Reports, Baltimore, 1895). Of all these perhaps the best two guides are the first and the penultimate, although the monograph by Thayer and Hewetson is perhaps second to none in the subject and contains much valuable information.

23. Those who have worked conscientiously and earnestly in search of accurate and definite knowledge in connexion with such questions as the unity or plurality of the malarial parasite, their general and specific characters, modes of infection and reproduction, together with the relations of the different forms of the parasite to one another and to the effects they produce on the human economy, will at once on the perusal of this brochure come to the conclusion that it is next to impossible to follow out these various questions in the way that has been described herein by any ordinary means of observation carried on exclusively on human malarial blood. I must confess that I would acknowledge the justification of such a statement. The results recorded are obtained by observations of the most diverse nature. At the present moment I find it difficult to recall the numerous sources from which this knowledge has been obtained; indeed, I might state that I obtained many valuable hints in this connexion from sources far and wide from the subject of malaria itself. I made the first step in material progress from observations on the hæmatozoa of lower animals. In this way, having obtained a clue, for instance, in regard to the life-history, it was put to the test in human malarial blood. There are many of the hæmatozoa of lower animals which it is possible to follow out with a certain amount of facility, such as the trypanosomata of birds, tricomonads of rats and fishes, and in a blood organism recently discovered by myself of the cobra (Naja tripudiens). Thus at one time a hint would be obtained from the general characters of an apparently irrelevant organism or the changes it passed through in a particular period of its life-history. Often, however, the source of information was by no means so significant—such apparently trifling incidents as the diameter of a cell, the presence or absence of a cyst-wall, an extra flagella, the position of the nucleus, the number of spores produced, the size or shape of the spore, the method of division, the time taken in sporulation of a parasite, its relation to the red cell, the form or forms of conjugation or engulfing, the quantity, character, or position of granules or plaques of pigment, the degree of transparency or visibility of one or other forms of a parasite, the method of forming chlamydospores and the effect of different kinds of stains on the different forms of the parasite,—each point had its meaning when tested by comparative observation on human malarial blood. Sometimes a verified observation of this kind was sufficient to fill up a broad hiatus. Such was the case, for instance, in the formulation of the theory of parthenogenesis. When I found that there were two distinct forms of multiplication in the malarial parasite, simple division and endogenous multiplication, or rather sporogenesis within chlamydospores in the former; it having been observed that in one variety of spherical cell the actual protoplasmic substance of the cell itself was split up into a certain number of parts, whilst in several other large cystic cells, formed by the union of two or more ovoid or irregular cells, the process of division began in the nucleus, which underwent karyokinetic segmentation after a very definite method.

24. In this case the encysted fluid protoplasm yielded the necessary nutritive pabulum for the process itself, as well as for the preparation of the spores to lead an independent life, affording them nutrition until such time as, having been set free, they were able to utilise the required constituents in the liquor sanguinis or they invaded a red blood cell, where they could find an excellent medium for further development. I will not weary the reader, however, with any further illustrations of this kind. It is, however, necessary to enter upon these few details to indicate that the statements made have been arrived at only after many years of direct and indirect investigation of the subject of malarial infection in the human being, supplemented by systematic collateral observations on the hæmatozoa of lower animals.

25. The foregoing remarks may likewise exclude argument to the effect that the views herein expressed have been arrived at by a series of guesses, and the origin of the impression that the writer having discovered a few main facts, the lacunæ between these were filled up by suppositional data or hypothetical suggestions.

26. One of the most useful combinations which I have found was osmic acid vapour and methylene blue. This gave a faithful representation of the blood as it is in the natural state when used as follows: the finger is pricked in the ordinary way and a cover-slip applied to the drop, whilst the hand is dependent and the drop lowermost. This drop is then spread out by means of a needle and rubbed over the surface. The fresh moist blood is then held over the vapour of osmic acid with blood side downwards, and allowed to remain there from fifteen to thirty seconds according to thickness of film of blood. To the moist blood is now added a drop of half-saturated aqueous solution of eosin and another of weak aqueous solution of methylene blue. The preparation is allowed to dry. It is then washed in distilled water and alcohol until only a faint blue colour is left. It is then allowed to dry and mounted in that state or in Canada balsam.

27. Another excellent stain is the combination of chromic and osmic acids—a 0·05 per cent. solution of the former containing 0 5 per cent. of the latter.

28. By fixing the fresh preparations with osmic acid we cause all structures not actually contained within the red cell to stand out prominently in relief and occasionally we may in an infected red cell in profile actually see the line of junction between the parasitic embryo and the red cell itself. The first effect of this preparation is to fix all animate objects instantaneously in the position they occupied in the preparation the moment it touches it, and presumably we get

a result which at least simulates the relations of the parasite in the circulating blood. Again, with certain stains, such as Löffler's alkaline solution used in full strength or the Ziehl-Neelson stain used quarter strength, a few of the parasites may be seen to be resting on the surface, especially if the staining has been preceded by fixing with osmic acid.

29. By fixing fresh blood preparations hourly with osmic acid we may follow out the life-history of the parasite with a certain degree of precision.

30. Löffler's stain, to which may be added ·05 per cent. of chromic acid, is by far the most satisfactory that I have used. It has numerous advantages over practically all other combinations. Personally I think its particular virtues dwell in the following qualities: (1) it gives excellent definition; (2) stains the red cell as well as the plasmodium; (3) shows pigment in its different forms; (4) shows difference between the hyaline body and the red cell, and demonstrates any particle of protoplasm in or on the capsule, besides exhibiting the rim of hæmoglobin outside contained spherical bodies; (5) stains all flagellate bodies perfectly, whether (*a*) attached, (*b*) free, or (*c*) intracystic; (6) stains small amœboid bodies attacking red cells from margin; (7) defines flagellated spherical bodies; (8) defines cystic bodies; (9) shows the structures of the different forms from the small nucleated spherical flagellated spores, or the exceedingly small spores of free flagella to the largest chlamydospores; (10) stains remnants of hæmoglobin of red cells bright red, although it might be here incidentally remarked that such eosinated remnants are very rarely to be seen; (11) stains contained plasmodia blue and the containing red cell pink; and (12) shows the flagella of small spherical bodies well.

31. We can colour the red cell with eosin water solution and other parts unaffected and then can follow its action very easily. By these means I was able to distinguish them as granules.

32. Solutions of osmic acid and alcohol have the important property of preserving the shape and appearance of the red-blood cells. Their use in this respect cannot be exaggerated.

33. For rapid observation it is useful to apply a drop of the staining fluid on the tip of the cleaned finger and through this drop to make the puncture. For this purpose Löffler's stain is best. The slide is then to be brought into contact with the drop and a cover-slip laid on it gently, the preparation being observed at once, or better after ten minutes.

34. Much has been stated against the use of stains in malarial blood preparations, and it has been specially objected that they cause abnormal appearances not present in the blood. Whilst this argument may apply to the coarser stains and those containing large percentages of alcohol it does not hold good under the use of non-alcoholic stains and sterilised staining fluids of low alcoholic strength.

35. Often all the hæmoglobin is dissolved in the serum in an hour or so after abstraction of the blood and then acts as a natural pigment on the parasitic forms present in the blood, so that we can watch all the phases of development or disintegration at will if we keep the stage warm. This is only an exaggeration of what is constantly taking place in the blood of malarial patients—solution of the hæmoglobin of red cells as a result of the active properties of the toxines formed by the multiplication of the parasitic bodies.

36. As the quantity of hæmoglobin dissolved in the liquor sanguinis is incapable of staining to any great intensity the parasite forms that have been set free, as they have usually a semi-transparent or whitish appearance, such of them as are ordinarily invisible now stand out in contrast with the more deeply coloured fluid in which they move about. In the case of the encysted and nucleated parasites, as the intra-cystic bodies and nuclei stain the pigment more than the other parts, this serves to map them out distinctly.

37. The practical worker can make use of this natural staining in various ways; thus he may now irrigate the field and wash out the hæmoglobin whilst many of the parasites from their greater adhesiveness remain. In this there is a natural isolation and staining without extraneous addition in the form of artificial pigments to the blood, to which the opponents of the parasitic theory take such exception.

38. It may be remarked that when there is an unusual quantity of hæmoglobin dissolved in the blood all cellular structures contained possess the same colour, and it is often difficult to distinguish red cells from spherical bodies of different kinds, including the spherules which have developed from the unfolding of crescents. The experienced observer, however, can usually recognise some peculiarity in each cell under such circumstances which enables him to distinguish its nature.

39. This fact I observed some years ago and in a note on the subject I wrote: "It must not be forgotten that when the slide blood preparation has remained for some time much of the hæmoglobin naturally contained within the red blood cells is dissolved in the serum, and sometimes the quantity thus dissolved out suffices to give the liquor sanguinis a distinctly reddish hue, but this effect is much more manifest in the peripheral part of the preparation. This solubility of hæmoglobin, in malarial blood has one point of practical importance, and that is, when the liquor sanguinis is rich in hæmoglobin it may impart a yellowish or even a reddish tint to those forms of the parasite which, as a rule, are either white or quite transparent."

40. Perhaps the best method of demonstrating the different varieties of "invisible" structures—especially the highly transparent sporocysts and their contents—is that of staining the blood directly by one or other of the various preparations of methylene blue, the most satisfactory being Löffler's alkaline solution and plain methylene blue itself.

41. The method is carried out as follows. A small drop of blood is caught up on the slide in the usual position, and to this is added an equal quantity of the fresh Löffler solution. The cover-slip is now carefully laid on and very gently compressed, so that the combined liquids make a uniformly thin layer which spreads to the edge of the cover-slip. The preparation is then sealed with Hollis's glue on a turn-table and allowed to stand for fifteen or twenty minutes, by which time the various contained bodies, including the red blood corpuscles, will be sufficiently stained to commence the observation, remembering, of course, that the intensity of the stain increases as time progresses for about six hours, and that no matter how carefully we endeavour to prevent evaporation the alcohol in the blood stain will volatilise. This latter, however, occupies some hours, so that if observations are carried out during the first hour and a half the complicating effect of pseudo-vacuoles is excluded.

42. Many of the forms referred to in this paper are quite invisible without stains, but staining can only demonstrate one phase of the parasite's life history[2] periodically throughout the course of observation of a single parasite. This can be easily arranged by the use of a moist, warm chamber in which a dozen preparations of the same parasitic form as that under observation are kept; as each phase is followed a step further, one of these specimens from the moist chamber is stained, registered, and numbered, the time of removal from the chamber being noted to avoid error and confusion later, and the condition of the blood found described at once.

43. The greatest amount of patience is demanded. In my original observations on the hæmatozoon of cholera, on one occasion, I was obliged to watch the changes in the various parasitic forms for seventeen consecutive hours, during which time I did not leave the microscopes under which the observations were being carried on. As the malarial parasite is a sporozoon closely allied to the organism I discovered in cholera blood the same kind of close observation is a *sine quâ non*.

44. It was by such close observation that it was ascertained that the process of reproduction is more than one of simple division of the different plasmodia into two parts; it is in most forms a definite physiological process precisely identical with the early period of reproduction in the higher forms of the animal kingdom; that is, there is a phase in which two or more elements unite and commence the process of germination. In every form of the parasite the stage of segmentation of nuclei is preceded by an amœboid change.

45. Having met with many difficulties and disappointments in this work I would advise those who are anxious to follow out the life-history of any one of the more complicated of the smaller protozoa to recognise that patient and attentive search is absolutely indispensable. It is, of course, essential to have reliable optical appliances to work with, and in this respect it should be observed that in following some of the details of structure and modes of development of the smaller parasitic forms a magnification of three thousand diameters is indispensable.

46. Such constant and attentive observation is the more necessary when we recognise that some of the changes occur

[2] It is possible with certain precautions to keep the parasite alive and watch its developmental changes in the stained state, but this requires most careful regulation of the constitution of the staining fluid and calls for extensive experience before success can be looked for.

quite abruptly and in a way that is opposed to all expectation, and if these observations are not carried over an adequate length of time it is probable that some important change in the developmental process will be lost. As interpretations of what takes place must be strictly in accordance with what we see, and as we cannot see all the changes without prolonged watching, it is obvious that such interpretations must be at most to a great extent hypothetical without uninterrupted attention. In short, granting that the observer is careful to accept nothing from inference, but verifies every fact by direct observation, that he is not influenced by any preconceived ideas, it should be possible to obtain the same results at will, and thus test one's own observations. Indeed, I believe the non-observance of these rules has been the cause of much error in previous work.

47. There is no series of experimental observations in which the danger of inference drawn from incomplete observation or in which the error of conclusions based on probability is more forcibly demonstrated than in these on malaria. Every phase in the developmental process has its important significance, and as each phase varies considerably in duration it is possible by a short absence from the microscope to miss one or more important events without which the whole fabric of this theory dwindles to an incomprehensible and chaotic jumble of unconnected data.

48. Hitherto the teaching in connexion with the life-history of the malarial parasite has had simplicity as one of its salient features; but those who took the trouble to peruse my original *brochure* on the subject must have recognised that several years ago the extreme complexity of the life of the parasite was to some extent anticipated.

49. I might here state that although future years may elicit certain additional details or modifications of the statements made herein they at present seem to me to possess a tolerable degree of certainty, and if the methods advised are followed there should not be great difficulty in testing these conclusions.

50. But this is another subject and one which is urgently in need of a great deal of attention, and from which I would take this opportunity of predicting a vast amount of information of an overwhelmingly interesting nature will be forthcoming. I have made a series of observations in this connexion and hope later to publish them, but they are at most of a perfunctory kind, although they will serve to indicate the chief forms which we are likely to meet under different circumstances.

51. Another important fact with which I became familiar was that the parasite may retain vitality for an indefinite period in the dried state. This I became acquainted with on one occasion by accident in the case of a patient whose blood on abstraction seemed to be "alive" with organisms. The patient left the station within two days and I was unable to get any further specimens of his blood, the dried ones being useless for detecting the forms they presented when moist. The original unstained slide preparations were moistened with distilled water and the activity of the various forms was restored within twenty minutes.

52. It is now exactly nine years since the investigations which form the subject of this communication were commenced, and during that period the changes that have occurred in the views on the subject of malaria have been most marked. Indeed, up to the year 1886 the theory of Klebs and Tommasi-Crudeli still formed the basis of the recognised pathology of malarial disease and was referred to in all our leading text-books. From 1886 onwards, however, Laveran's views came more and more into prominence, but it may be stated that at no previous period has the question of the parasitic origin of malaria received more attention than it does at the present day. In almost every medical journal we take up there is something about the nature of malaria. It is well that there is discussion on the subject, for it is only by the honest argument of earnest searchers after the truth that we can arrive at the real solution of the question.

(To be continued.)

SOUTH-WEST LONDON MEDICAL SOCIETY. — A meeting of this society was held at the Town Hall, Wandsworth, on Nov. 11th, the President, Mr. B. Duke, being in the chair. Dr. John D. Malcolm read an interesting paper entitled "Some Remarks on the Management of Cases of Abdominal Section." A discussion followed, in which several members took part, and the meeting concluded with a hearty vote of thanks to Dr. Malcolm for his paper.

NOTES ON A CASE OF CARBOLIC ACID POISONING.

BY JOHN MACKENZIE, L.R.C.P., L.R.C.S. EDIN., L.F.P.S. GLASG.

ON Sept. 24th, at 4.45 P.M., I was called suddenly to see a woman aged twenty-three years, and on arrival found her in a comatose condition. The face was livid, she was frothing at the mouth, the pupils were contracted, and the conjunctivæ insensible to touch; breathing was slow, laboured, and stertorous; the temperature was subnormal, the skin was cold and clammy, and the pulse, though decidedly weak, did not present the same hopeless aspect. The patient was stretched in bed surrounded by two or three neighbours, who professed to know nothing of the cause which produced so desperate a condition, and thus unwittingly for a moment shrouded the case in mystery. On cross-examining the mother the following facts were elicited. For six months previously the girl had been strange in her manner and was considered by her parents to be going "wrong in her head." On the afternoon of the day in question she went to a druggist's shop, bought an ounce of carbolic acid, came home and had a hearty dinner, and then went upstairs for her afternoon "nap." The mother, thinking things were all right, did not disturb her till tea-time—an interval of more than three hours—when she found her in the condition already described, with a phial of carbolic acid more than half emptied by her side and a letter addressed to her mother couched in the pathetic terms usual in cases of suicide. Instantly on discovering that it was a case of carbolic acid poisoning I applied a syphon tube and managed to pass it into the stomach with but little difficulty, for, indeed, there was no resistance, and I soon removed half a pint of dark-brown liquid smelling strongly of fresh herring and containing some bits of undigested fish, but having little or no odour of carbolic acid. Next I passed into the stomach half a pint of olive oil and after a few minutes withdrew it, mixed with more stomach contents. Then I passed half a pint of milk and chalk, which after an interval of a few minutes was removed. Warmth was applied to the sides and extremities and hot fomentations over the cardiac region. Then several times half-pints of strong hot coffee were poured into the stomach and removed after a few minutes. No sooner was this done than there were signs of reaction, slight twitchings in the feet and left arm were noticed, and the left conjunctiva became faintly sensitive. Thus encouraged—for I had considered the case hopeless—I directed my assistant, Mr. Davie, to continue to pour hot coffee into the stomach and alternately withdraw it, while I emptied the bladder of about two pints of what appeared to be normal urine. By this time we considered muscular power so far restored that apomorphine hypodermically administered would act. Accordingly a full dose—ten minims—was given. Very soon emesis set in, but nothing came save coffee and chalk. At 7 P.M, after nearly two hours' work, natural warmth returned to the body, the face lost its lividity, the breathing became normal, the patient could open and close her eyes, and the pupils responded to light. At 7.30 P.M. she was given half an ounce of brandy mixed with four ounces of coffee in tablespoonful doses every fifteen minutes. At 8 P.M. we left the house feeling assured that whatever might be the ultimate result a sudden fatal termination had been averted. I visited the patient at 10 P.M., and found the temperature to be 100° F., the pulse 84, and the breathing normal. At midnight she was much improved. So far as acute symptoms are concerned the patient made an uninterrupted recovery. Mentally, for over a week she was dazed and delirious and appears to be unconscious of what has happened.

Remarks.—Although the patient drank more than four drachms of the acid the most careful examination could not detect any discolouration, whitening, or corrugation on the lips, tongue, or gullet. At first, anticipating that the case would end in a coroner's inquest, we made special and repeated careful examinations of the buccal mucous membrane and found it quite normal, presenting no marks whatever. On the neck there were two or three red marks apparently due to drops falling from the phial as it was removed from the mouth. Seeing that there was an

interval of nearly three hours between taking the acid and the commencement of treatment a fatal termination must have taken place except for the fact that she took the poison on a full stomach, which prevented its quick absorption into the circulation. The urine removed had a slightly dark colour, but no odour of carbolic acid. A sample of the stomach contents was preserved and tested with HNO_3 and liquor potassæ, when it turned blood-red, then brown-red, and finally pea-green. The fæces passed had the odour of phenol and were dark olive-green in colour. From a medico-legal point of view the most interesting point about the case is the possibility of swallowing a fairly large dose of carbolic acid without any of it coming in contact with the buccal mucous membrane. In all other respects the symptoms were of a classical type.

Kirkby-in-Ashfield.

THE FATAL RECORD OF CARBOLIC ACID.

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For a considerable time past chemists, druggists, medical men, and coroners, together with the pharmaceutical and medical papers, have been calling aloud on the "powers that be" to place restrictions on the sale of carbolic acid by the simple expedient of scheduling it as a poison. Hitherto their efforts have been in vain, and consequently accidental poisonings and self-murders continue from day to day, when, by classifying it among such drugs as prussic acid, strychnine, arsenic, and even the "vermin killers," it would at once cease to be a means of depriving so many people of their lives, and that, too, in a most painful and cruel manner. From the conversations I have had with many persons who believe that something should be done to prevent its promiscuous sale or distribution, I have proved that they have only a small idea of the extent of the mischief it has effected in recent years. I propose to give a plain statement of the deaths it has caused since it made its first appearance in the records of the Registrar-General in 1864, when a female was accidentally poisoned by it. This death was followed in the very next year by that of a male through misadventure. During the succeeding five years (1866–70) carbolic acid poisonings, accidental or suicidal, increased to 25, and in each of these years, with the exception of 1867, some 6 persons met their deaths. These deaths were 1, 0, 7, 6, and 11 respectively in the years 1866–70 (inclusive), and of these 2 were the suicides of men in 1869, while in 1870 5 were suicides (two men and three women). These were the first cases of suicide noted in the Registrar-General's reports, and were, unfortunately, only the beginning of that long series which has continued from that day to this. In these five years these suicidal deaths were only 1·0 per cent. of all suicides by poison.

Now there is something very noteworthy about these suicidal deaths—namely, that they occurred immediately after difficulties were put in the way of the public procuring those drugs, which had previously been used for suicidal purposes, by the passing of the Pharmacy Act of 1878 and their subsequent scheduling. From this time forth those persons (particularly women) who sought to take their own lives had recourse in even greater numbers to that poison (carbolic acid), which they could buy without let or hindrance from any oilman, hucksterer, or druggist. I have intentionally used the words "particularly women," for it is a most remarkable fact that more females than males have deliberately killed themselves with this acid, possibly because they find it readily at hand in their homes where they have been using it as a disinfectant. This is true of each quinquennial period from 1871–75 down to that which only closed with the end of 1895. In the five years 1871–75 there were 128 deaths from misadventure and suicide, or nearly 25 deaths per annum. Of these deaths 42 were suicidal, and of these suicides 23 were women and 19 males. The 42 suicides represented 5·8 per cent. of the total suicides by poisoning. Now it was in this quinquennial period that an active impulse was given to sanitation by the passing of the Public Health Acts of 1872 and 1875 (particularly by the latter), and it is a remarkable circumstance that the suicidal deaths from carbolic acid increased 135 per cent. during the succeeding quinquennial period (1876–80). Surely this looks like "cause and effect," for it was then that for the first time very active sanitary measures were adopted by local authorities, who recommended that disinfectants, carbolic acid chiefly, should be used to abate nuisances and promote health. It was then that this poison came into the homes of the people under the cloak of a welcome guest, only to be discovered later as a traitorous friend. The succeeding five years, 1876–80, showed a still further increase, for the deaths from negligence, misadventure, and suicide numbered 181, or a yearly average of 36. In this period there were 81 suicides, 28 males and 53 females, and these formed 7·8 per cent. of all suicides by every other poison.

In the quinquennial period of 1881–85 the 181 deaths from negligence, misadventure, and suicide of the preceding five years jumped up to 302 (an annual average of slightly over 60), and of these 191 were suicides. These suicides were an increase of 135 per cent. on the return for the preceding five years, and were 15·6 per cent. of all suicidal poisonings. Of the 191 suicides 92 were men and 99 women. The average number of suicides per annum was 38 from 1881 to 1885 inclusive. The succeeding five years, 1886–90, showed matters in a no better light, for the total number of deaths rose to 342, while suicides increased to 215, or an average of 43 annually, and they were 15·4 per cent. of all suicides by poison. I am unable to give the next quinquennial period in full, because the Registrar-General's returns for 1895 have not been issued, but the returns for four years that I have tabulated show matters in their very gloomiest light. In these four years, 1890–94, 549 deaths occurred through taking carbolic acid either by misadventure or with suicidal intent, and of this number 420, or 76 per cent., were suicides. In each of these four years on an average 137 persons died from the effects of this poison, and of these 105 died by their own deliberate act. The records of these last four years (1891–4) are most startling, for they indicate that carbolic acid, which was the cause of only 5·8 per cent. of the suicidal poisonings in the 1871–5 period, now occasioned 28·0 per cent. In no one year, with the exception of 1888, did men and women take their lives to a greater number than 64, but in the last return (1894) 167 miserably ended their existence with it; while in 1891, 63 persons destroyed themselves; in 1892, 73; and in 1893, 117.

At the present moment suicides with carbolic acid promise to outstrip the united poisonings by oxalic acid, opium, laudanum, prussic acid, cyanide of potassium and strychnine. These in the quadrennial period of 1891–4 were used as a means of suicide in 580 instances, whereas carbolic acid was used in 420. The time was when laudanum, morphia and opium were the favourite poisons, but now carbolic acid has taken their place, and according to the last available return (1894) the latter caused more than twice as many suicidal deaths as the three former combined, for, whereas the opiates poisoned 82 persons, carbolic acid poisoned 167.

Period.	All deaths from carbolic acid poisoning.		Suicidal deaths.			
	Gross numbers.	Average per annum.	Males	Females	Totals.	Average per annum.
1861–65 ...	2	—	—	—	—	—
1866–70 ...	25	5	4	3	7	1
1871–75 ...	128	25	19	23	42	8
1876–80 ...	181	36	28	53	81	16
1881–85 ...	302	60	92	99	191	38
1886–90 ...	342	68	97	118	215	43
1891–94 ... (4 years.)	549	137	193	227	420	105

In the period 1861–5 the suicides by carbolic acid were 0·00 per cent. of all suicides with poisons; in 1866–70 they were 1·00 per cent.; in 1871–75, 5·82 per cent.; in 1876–80, 7·93 per cent.; in 1881–85, 15·37 per cent.; in 1886–90, 15·49 per cent.; and in 1890–94 (4 years), 28·01 per cent.

This is the fatal record of carbolic acid during the last 35 years. As a set off against its ill deeds it is said to have saved lives as a disinfectant. No doubt it has been very

useful, but I doubt if it would ever have got a hold on the public but for two facts, one that it was practically the first disinfectant in the field, and the other that it was cheap. Since those early days many disinfectants, some of an absolutely non-poisonous character, have been introduced, and therefore its services are not so requisite as in the past, and it is to these non-poisonous disinfectants that those who have the charge of the health of the people in their hands should turn. It seems to me most absurd that medical officers of health of all men should continue to place this acid so freely in the hands of the public now that its record is known. I have for many years avoided its use when I could, its danger having been brought forcibly under my notice about 1884 through a suicide that occurred in the borough I then presided over. The deaths it has caused we know, the lives it has saved are doubtless not a few; but we also know that other and non-poisonous disinfectants can do their work, and therefore it seems to me that carbolic acid should be put aside from general use and only employed by skilled hands or under professional direction.

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ON VARIOUS FORMS OF TALIPES AS DEPICTED BY X RAYS.[1]

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(*Continued from page 1456.*)

VARUS, whether congenital or acquired, is rarely seen as a pure unmixed deformity, but is usually combined with a certain and sometimes a considerable amount of equinus, constituting the condition known as equino-varus. Its congenital form is thought by many,[2] relying on an inward inclination of the neck of the astragalus, to indicate a remotely derived atavism—a recurrence to ancestral pre-human type. It is true that such deflection causes the bone to approach in shape that of anthropoid apes, but deviations of that bone occur in all tolerably severe talipes of whatever class; if it take place in one direction the bone approaches the simian, if in another the plantigrade, if in a third the digitigrade type. Moreover, such deflections are found in feet which, born perfect, have only during viable life assumed deformity, influenced by some easily traced causation quite independent of developmental errors.[3] Thus such basis as alteration in the form of the astragalus-neck appears to afford a somewhat narrow foundation for so wide a superstructure, save, perhaps, in some instances of talipedic origin at a very early period of intra-uterine life. For congenital varus may arise either very early—viz., some time between the fourth and tenth week of gestation, when the future skeleton is being sketched out in cartilage or later—that is, after the third month, when that plan has been for some time complete. To the former period belong certain other malformations, with which club-foot is, however, combined, such as absence of bones or epiphyses, crural, tarsal, or metatarsal, also absence of parts of the central nervous system; likewise those singular truncations with which intra-uterine amputations must not be confounded.[4] In the latter category of congenital talipes the causal factors are position *in utero*, the foot abutting either against the walls of that cavity or against some part of the fœtal body, or imprisonment of the extremity by amniotic bands or by a loop of the funis. Often the mothers of talipedic infants have told me that during a considerable part of the later months fœtal movements have been tumultuous, suggesting the idea of eclampsia, throwing the foot into an abnormal position not afterwards corrected. These conditions of the later congenital varus connote a position of the extremity within the uterus which, causing divergence in false directions, produces faulty growth and form of bone, and at the same time as the distance between origin and insertion of muscle, fasciæ, and ligaments is on the one side increased, and on the other diminished, so are these structures developed abnormally long on one side and short on the other. These different constituents (osseous and fibrous) of the deformity are, therefore, neither of them primary nor secondary, but simultaneous; they both own the same origin, but do not stand to each other in the relationship of cause and effect. Nevertheless, those fibrous structures, short and unopposed or feebly antagonised, maintain the faulty position of the bones and by tying them into false postures influence both before and after birth their further growth, thus adding continually to the false development and malposture.

Acquired varus is caused by paralysis more or less persistent or transient, or to exaggerated clonus with shortening of certain muscles, or even to a posture too long maintained,[5] also to contracture, cicatricial or otherwise, of tendons, fasciæ, or skin. In fact, barring external surroundings, acquired has much the same causation as the later forms of congenital varus. The weakened or lengthened muscles are in this form of talipes the abductors and external rotators—viz., the peronei—and until a high grade of deformity be obtained the extensor longus digitorum; secondarily, and of less importance, the muscles on the outer side of the sole. The

FIG. 3.

Talipes equino varus (girl aged sixteen years).

contractured ones are the anterior and posterior tibials, and unless, which is unusual, some calcaneus be present the surals, nearly always the extensor longus hallucis, is involved, and in severe cases the flexor also. After a certain period of malposture the muscles, ligaments, and fasciæ on the inner margin of the foot adapt themselves by contracture to this new position. The last two change much in form. I have seen the inner border of the plantar fascia thickened and, as it were, rolled up almost into the shape of a round cord; ligaments become matted together and shift somewhat their places of attachment. Thus the anterior border of the deltoid gets mixed with the inner margin of the anterior ligament of the ankle-joint, and both with the superior astragalo-scaphoid, forming a band interspersed with cord-like thickenings, which, however, has been described by Mr. Parker and Mr. Shattock as a capsule. Also the inferior calcaneo-scaphoid ligament is in severe cases very much shortened. All these forces—viz., the excessive or unopposed contraction of the two

[1] The skiagrams are taken by Mr. Sydney Rowland, late Shuter Scholar, St. Bartholomew's Hospital.

[2] Parker and Shattock, Bessel Hagen, Walsham, &c.

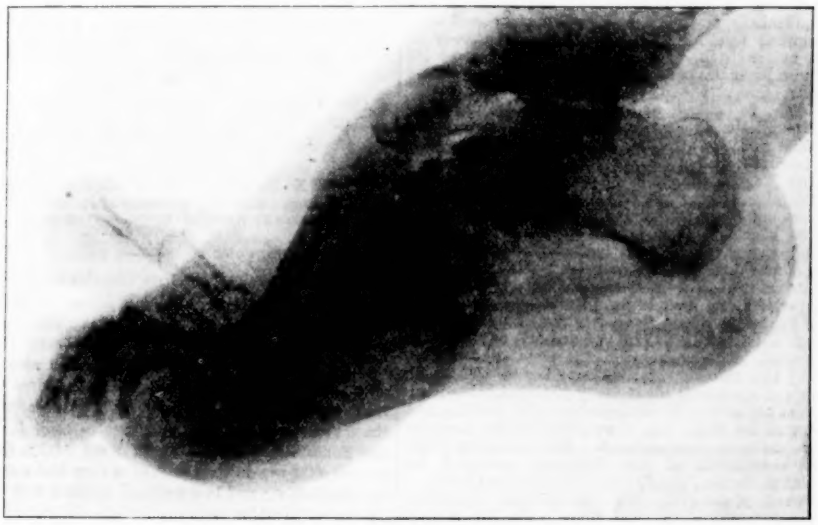
[3] In my first paper was a skiagram of equinus in which the neck of the astragalus was bent strongly downward (digitigrade type), yet the deformity originated in paralysis occurring during the fourth year of life.

[4] In a goodly number of these cases one may see just emerging from the rounded stump-end tips of minute fingers or toes even with the nails marked out, and these diminutive extremities are usually capable of a certain amount of voluntary flexion, supination, &c.

[5] More than one case of varus has been published produced by a painful ulcer or corn on the inside of the sole. I have successfully treated a well-marked equinus due to such an ulcer on the heel, and have traced up severe cases to long lying in bed with the feet plantar-flexed, as also to children being allowed to sit for lengthened period without a rail for the feet, which therefore hung pointed down.

tibial muscles, the slower but hardly less potent contracture of ligaments—drag and hold the scaphoid upwards and inwards in close proximity to the inner malleolus, thus rotating inward and adducting the front half of the foot. Meanwhile the posterior tarsus is so abducted that the point of the heel is thrown inwards, and the anterior end of the bone, together with the head of the astragalus, outwards. It is also so twisted that the latter lies almost vertically upon the former, and that the proper inner surface of the calcaneum looks no longer directly inwards, but also much upward. The result is that both the back and front of the foot are twisted in the same direction; both those portions are bent towards the inner malleolus and are strongly folded on each other. Thus a varous foot always comes to the ground on its outer margin, and the patient stands and walks in less severe degrees on the outer surface of the anterior end of the os calcis, or, much equinus being present on the cuboid and base of the fifth metatarsal bone; indeed, if varous twist be more severe almost on their dorsal surface (this posture is well shown up in Fig. 8), the inward twist and adduction of both halves of the foot bring the head of the first metatarsal bone and the front of the heel very near together and mark out well the salient angle at the outer side of the dorsum and the entering angle at the inner margin of the sole, the former consists of the head of the astragalus, whose globular form is easily to be felt, strange as it may seem, almost on the outer margin of the foot. In the entering angle the finger pressed in firmly may find an obscure sense of a hard substratum somewhere in the distance, but can detect no bone in normal contiguity to the

FIG. 9.



Skeleton of above foot, outer side on plate.

FIG. 10.

Skeleton of above foot, sole on plate.

skin. In this case the sharp bend (plantar flexure) of the first metatarsal bone has thrown the extensor hallucis into unusually strong tension; hence the position of the great toe.

The skiagrams (Figs. 9 and 10) are both from the same case as the photogram. I found it impossible to represent the complicated changes in a single figure. The former was taken with the patient lying on the side. Upon the plate the outer border of the foot was placed, the salient angle of which caused certain bones to lie further than others from the sensitised surface and thus to be somewhat foreshortened. The astragalus body is short from before back, and only a small portion of its upper articular facet lies out of the socket anteriorly. The neck is long, thin and bent downwards, the head barely marked. The os calcis and its posterior tuberosity is very short and the anterior is narrow from above down, except at its termination; thus the opening of the interosseus channel is large, forming a remarkable angular gap bounded by two triangular projections; but if the photozinc produced from the negative and the printing be good enough some of the bone forming the posterior and inner wall of the sinus tarsi will be visible as it is in the negative. But it is not so much the shape of each individual bone as their relative position which is shown in these skiagrams, and in reference to this plate I would draw attention to the manner in which the cuboid is plantar flexed on the calcaneum, the scaphoid on the astragalus, and again the cuneiform on this latter; each of these also is curved upon itself downward. The position of the metatarsals is, as illustrated by this side view, rather complicated. The first (the longest and most vertical) is easily distinguishable; the fifth (the most horizontal) is recognisable by its position and by the form of its base: the three intermediate ones can with a little study be differentiated. This skiagram illustrates that constituent of the deformity produced by excessive plantar flexion, chiefly at the medio-tarsal joint.

The annexed plate (Fig. 10) shows more especially adduction and rotation. It was taken with the patient lying on the side, the sole being on the sensitised plate. So sharp was the inward rotation of the foot that the leg was nearly parallel with the floor. The vacuum tube hung over the extremity a little in front of the lower edge of the tibia. Thus if the figure be turned so that the tibia is vertical the plate illustrates the walking position of the foot the same as in the photogram, but viewed more from the front. Besides modifications in the form of bones this skiagram shows very remarkable changes in position. All the posterior tarsus is twisted on an antero-posterior axis, therefore the head of the astragalus lies almost vertically over the anterior tuberosity of the os calcis, which it would more completely conceal were it not much atrophied. These two bony prominences being also thrown outward (the heel is adducted) lie quite on the outer border of the foot. It is a remarkable position for the head of the astragalus to assume. All my skiagrams, and I have a goodly number, exhibit that position, and in all cases of varus the rounded head can be felt a little in front of the outer malleolus. Upon these misplaced posterior bones abuts the adducted anterior tarsus, so that these two constituents of the foot which ought, as far as this view from above is concerned, to be on one and the same axis—that is, in a straight line with each other—are bent at an angle. For instance, if a line be drawn through the middle of the os calcis and astragalus, and from the point where that line cuts the head of the latter bone another be drawn to the middle of the first metatarsal bone, thus bisecting, or nearly so, the scaphoid and inner cuneiform, then the angle at which these two lines meet will be found to be very little more than a right one—viz., 98°; one of my skiagrams gives 93°. The great amount of adduction is effected by a subluxation at Chopart's joint, the scaphoid having entirely left the head of the astragalus. It lies upon the inner and, the twist of that bone taken into account, lower surface of its neck.[5] The gap seen posteriorly between the articular surfaces of those bones is filled up by the above described altered ligament, which, like other soft parts, is traversed, therefore is not shown, by x rays. In like manner the outer part of the calcaneo-cuboid joint is open. Thus the first row of tarsals anterior to the mid-tarsal joint is aslant on the posterior tarsus, the cuneiforms upon them, and again the metatarsals upon those; therefore, as each obliquity takes place in the same direction the crookedness increases as we trace forward the shape of the extremity. The outward bend of the metatarsals is due to weight-pressure on the floor and the abduction of the toes to the action in this changed position of the extensor of digits and hallux.

Wimpole-street, W.

[5] The scaphoid often lies, as in one of my skiagrams, a good deal nearer to the inner malleolus, therefore still further back on the neck, indeed almost on the body of the astragalus.

TREATMENT OF SERIOUS OPEN WOUNDS IN MALARIAL DISTRICTS IN WEST AFRICA,

AND A CASE OF COMPOUND COMMINUTED FRACTURE OF THE RIGHT TIBIA IN WHICH A ROENTGEN PHOTOGRAPH TAKEN TWO YEARS AFTERWARDS SHOWED GOOD UNION.

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A SURGEON who has had no experience of severe wounds in a fever district will invariably find a difficulty in deciding how to treat them on account of the possibility of gangrene setting in, a result specially to be feared from the foul smells caused by rotting vegetation and also from the fear of malarial fever supervening during the time the patient is laid up and recovering. The following cases will show that these two complications do not necessarily follow. During the Benin River Expedition in West Africa (August, 1894) the hospital was in the midst of a very bad swamp, close to the Benin River and in a malarial district well known to be dangerous to white men.

CASE 1.—A gunner's mate (R.N.) had a large scalp wound about four square inches in size, with fracture of the outer table of the skull. He was three weeks in hospital.

CASE 2.—A bluejacket (R.N.) had the whole of the left forearm shot away, the left hip bone shattered, the right buttock over an area of twenty square inches also shot away, and a slight wound of the face. He was six weeks in hospital.

CASE 3.—A fireman (R.N.) had his foot smashed, which was afterwards amputated. He remained about two weeks in hospital.

CASE 4.—An officer had one finger shot away and another badly fractured.

CASE 5.—Another officer had a compound comminuted fracture of the femur; he died seven days afterwards, but not from fever or gangrene.

CASE 6.—A bluejacket (R.N.) was shot in the back. The left lung was slightly wounded and the bullet was supposed to be felt near the spleen. This man was in hospital several weeks.

In all these cases, which were dressed with carbolic acid lotion, 1 in 20, only slight malarial fever occurred, the temperature was never very high, and none of the wounds showed signs of septic poisoning. They all recovered ultimately with the exception of Case 5.

CASE 7.—As to the particular case mentioned in the heading of this communication, that of a major of the Niger Coast Protectorate, the following is a brief account. He was wounded by a piece of brass, which struck his right leg about four inches below the knee, smashing the tibia into several fragments and lacerating a large part of the tibialis anticus muscle. The piece of brass then passed down between the tibia and fibula and came out posteriorly about five inches above the ankle. The wound was dressed the same day and two days afterwards a consultation was held by four surgeons. Three decided to amputate, as they were afraid of gangrene and fever; but I held out against my colleagues and they consented to give the patient a chance of retaining his leg, taking into consideration that both the tibial arteries were pulsating and the knee-joint not opened. The patient was also in a healthy condition physically and mentally, and from my previous experience I did not anticipate serious fever or gangrene. Several pieces of bone were removed, one measuring an inch and a half. Drainage-tubes were put in the wound and kept in for seven weeks in the hospital and during

the voyage to England. The leg was steadied in two lateral plaster-of-Paris splints, extending from above the knee to the toes. On the patient's arrival in London some dead bone was removed and several months afterwards small flakes of bone were discharged. Although several pieces of the tibia were removed during the operation there was not one-sixteenth of an inch of shortening as compared with the sound leg. Even in this severe wound, which was exposed for seven weeks to the emanations of a West African swamp, there was never any sign of septic poisoning and only once slight malarial fever. In September, 1896, a Roentgen photograph was taken of the wounded leg. On examination of the same a slight thickening of the bone was observed over the fracture and what seemed to be a spur of bone nearly extending to the fibula.

West Africa.

CASE OF MEASLES COMPLICATED WITH PNEUMONIA, FOLLOWED BY SCARLET FEVER AND DIPHTHERIA.

By E. B. MACDONALD ATKINS, L.R.C.P. & S. EDIN., &c.

THE following case may, I think, be looked upon as almost unique in medical practice

In the evening of Nov. 6th, 1895, I was called to see a delicate-looking child three years old who had been suffering with measles for some days, but prior to my visit had not been under regular medical treatment. On my arrival the child's mother informed me that he had been going on well so far as the measles was concerned, but that he had a troublesome cough, which seemed to be getting worse, and all through the day she noticed that his breathing was rather quick, and fearing that he was getting bronchitis she thought it better to have medical advice. On examining the boy I found his temperature to be 102·6° F., the pulse 130, and the breathing quick and irregular; but on account of the child being very restless it was impossible to get a correct estimation of its rate. Well-marked congestion of the base of the right lung was present, so I prescribed small doses of calomel and Dover's powder and ordered linseed poultices. Next day the temperature had risen to 103° and the case had developed, as I expected it would, into ordinary acute pneumonia affecting the lower lobe of the right lung only. Under treatment the patient went on very favourably, the temperature coming down and the lung commencing to clear on the sixth day. Two days later the temperature again rose, reaching 103·6°, and a fresh area of dulness appeared. I began to fear the case was about to turn out badly. In a few days, however, the temperature began to fall and the dulness cleared rapidly, and by Nov. 24th, eighteen days after first seeing the case, it was given over as convalescent. On Dec. 4th I was again requested to see the child. This time I found him suffering from scarlet fever; his throat was very much inflamed and his body covered with the rash. His temperature was 103·8° and his pulse 140, with restlessness and constipation. A calomel powder relieved the bowels, and on the following day the temperature had fallen to 101° and the pulse to 120. By the 6th the rash commenced to fade, but the throat made no progress whatever. On the contrary, the inflammation about the uvula and soft palate seemed more intense, and the child's condition was far from satisfactory, and continued so until the 8th, when an extensive diphtheritic patch appeared on the soft palate and uvula. The temperature had risen to 104·8°, the cervical glands became enlarged, and the urine contained albumin. The patient was placed on iron, sulphate of magnesium, and perchloride of mercury, the throat being painted four or five times daily with a mixture of salicylic acid, sulphur, and glycerine. On the 9th anti-diphtheritic serum was injected, and immediately afterwards the temperature, which had fallen to 103°, went up to 105°, but fell again by the evening to 104°, and the following morning to 103·5°. The child was now in a very prostrate condition, taking scarcely any nourishment, and to all appearance the case was hopeless. By the 11th there was slight respiratory stridor and a fresh patch appeared on the back of the throat; the temperature had gone up to 104° and the pulse to 150. Another dose of antitoxin was administered, after which the temperature reached 105·4° and the pulse could not be counted. This state of affairs continued, to my astonishment, for two days, when the temperature fell to 103° and the pulse to 140. The child then began to take more nourishment and altogether assumed a condition which appeared favourable, the temperature oscillating between 102° and 103° for about a week, when severe diarrhœa set in and I thought we should lose the patient. His strength was so exhausted that I failed to see how he could possibly battle against this new trouble. After continuing for two days, however, it ceased and the child once more began to make progress, but very slowly, as was naturally to be expected. There was extensive sloughing about the soft palate followed by paralysis, which made it most difficult for the patient to swallow the fluid nourishment. There was also deafness and discharge from both ears, this latter being treated with iodoform pigment. He has made a slow but uninterrupted recovery, the only sequela being the aural trouble. The discharge appears at intervals, but is not so copious, and the hearing is greatly improved. The paralysis of the soft palate has entirely disapeared.

Of course, individually considered, the case did not present much that was unusual, but it was the fact of the four diseases following each other so closely in an already delicate subject, and ending as it did in recovery, which makes it remarkable. I feel certain that in this instance the diphtheria was due to an unfinished upcast shaft from a house drain; the child's throat being much inflamed was, no doubt, in a favourable condition to absorb the poison, and the foul gas from the pipe had not far to travel to reach the bedroom window.

Bridgend.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

MALIGNANT DISEASE OF THE BREAST OF TWENTY YEARS' DURATION THREE TIMES SUCCESSFULLY OPERATED ON.

By D. CAMPBELL BLACK, M.D. GLASG., F.R.S EDIN.,
PROFESSOR OF PHYSIOLOGY IN ANDERSON'S COLLEGE MEDICAL SCHOOL.

THE question of operation in malignant disease of the breast, especially in the aged, is one of the most debateable in surgery. The following brief notes of a malignant case thrice successfully operated on may, therefore, be interesting to surgeons.

The patient, a widow, is now seventy-one years of age. In August, 1884, she consulted me regarding an indurated tumour in the breast which presented all the appearances of scirrhus, with retraction of the nipple, lancinating pain, &c., and rapid growth. She stated that, at the very least seven years previously, she noticed a swelling in the breast. In September I removed the whole breast and all the diseased tissues. The patient was, and continues to be, spare, but is otherwise in good health. The axillary glands were not affected. No microscopical examination of the tumour was made in 1884. The patient made an excellent recovery and continued in good health till 1890, when a recurrence of the disease appeared in the cicatrix. This it was deemed advisable to remove, and I accordingly did so in April, 1890. The patient again made a capital recovery and, as on the former occasion, enjoyed excellent health and comfort subsequently to the operation. No complaint was made to me regarding the breast until the beginning of this year, when the patient called upon me and showed me a very considerable tumour in the same site as formerly. The tumour had a tense appearance and feel, showed marked vascularity, and was accompanied as before with lancinating pains. In view of the now advanced age of the patient (seventy-one years) doubt was expressed by my friend Dr. James Lawrie, whose able assistance I received on the former occasions, whether

it would be wise to interfere again. The patient, however, inclining to an operation, the former history of the case influencing me in the same direction, and the tumour threatening to burst and ulcerate, I advised it. For this purpose the patient was placed under chloroform on March 29th, when Dr. Lawrie accidentally discovered a swelling in the anterior angle of the neck on the left side, near the origin of the sterno-mastoid muscle. It was his opinion that here we had evidence of disseminated cancer and he urged the impropriety of proceeding with the operation. To this suggestion I at once acquiesced. Subsequently I carefully examined the swelling in the neck, and coming to the conclusion that it was not solid, and that it had no connexion with the mammary tumour, I opened it freely and was able to empty it of a caseous friable material. This swelling has almost disappeared. Encouraged by this, and yielding to the solicitations of the patient, I proceeded to remove the mammary tumour on March 5th, with the assistance of my friends Dr. James Lawrie and Dr. Erskine. The tumour was freely removed in the usual manner. On the first free incisions being made a large quantity of blood and caseous matter were squeezed out before reaching the more organised tissue. No antiseptics were used; the wound healed by the first intention except around the drainage tube. The patient, now in her seventy-second year, is once again in excellent health and capable of undertaking a walk of from four to six miles, after being thrice operated on within the last twelve years for an affection of the breast, from which she has to her certain knowledge suffered for nearly twenty years.

The question arises, What is the nature of the tumour? That it is of a malignant nature its proneness to recurrence amply demonstrates. Careful microscopic examination by Mr. Marmaduke Sheild and Dr. H. D. Rolleston of St. George's Hospital, and Dr. Thomas Reid and Dr. Bell Todd of Glasgow and myself, gave negative testimony as to pathognomonic cancer cells; the diagnosis, therefore, of scirrhus is based on clinical evidence, and suggests the question whether there are really special and characteristic cancer cells. I am much inclined to doubt it, and in this view I am supported by competent microscopists.

Note.—I have examined the cicatrix to-day (Nov. 9th) and I regret to add that a hardness of a very suspicious character exists in and around it. There can be no doubt that the disease is scirrhus and that it has existed for about twenty years.

Glasgow.

ON THE DOSAGE OF SOME OF THE VASO-MOTOR DILATORS.

BY ANGEL MONEY, M.D., F.R.C.P. LOND.

I SHOULD like to offer some conclusions as to the use of nitro-glycerine in children. The drug appears to have no toxic effects in infants and small children, even in very large doses. It is my constant habit to prescribe one minim of a 1 per cent. solution to infants under the age of two years every two or three hours. I use it in place of the sweet spirits of nitre, and prescribe paraldehyde separately. Let me give an illustration from my case-book. A female infant aged nine weeks was seen in Sydney on March 25th, 1894, in the status epilepticus. The exact prescription was one grain each of the bromides of ammonium, sodium, and potassium, three minims of tincture of belladonna, one minim of solution of nitro-glycerine (1 per cent. alcoholic solution), ten minims of glycerine, with peppermint water to one drachm in water every four hours. This was kept up for forty-eight hours. On April 9th, 1894, the fits had returned in great severity and the same dose was repeated every three hours for another two days. This case is mentioned because the child has been seen by me at frequent intervals up to the present day, and, so far as I know, the nitro-glycerine has done no harm. The fits have long ceased to occur. She is still brought to me from time to time on account of severe urticaria, which I have not set down to the nitro-glycerine, but which is, as is not infrequently the case, very refractory to treatment. The alcoholic solution of nitro-glycerine figures largely in my prescriptions and has done so for many years past.

Sydney, N.S.W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

TWO CASES OF DEATH FROM A NEEDLE IN THE CHEST.

(Under the care of Dr. SAINSBURY and Mr. BERRY.)

FOR the notes of the following two cases of death caused by needles in the chest recently observed at the above hospital, we are indebted to Mr. F. C. Bottomley, senior resident medical officer.

CASE 1.—A man aged fifty-six years was admitted to the hospital under the care of Dr. Sainsbury on Aug. 22nd of this year complaining of great pain in the back and of having brought up some blood; these symptoms had been present for four days. During the two days he lived in the hospital his pain was very severe, the temperature varied between 102° and 104° F., and he had frequent attacks of hæmatemesis. At the post-mortem examination Mr. Wingfield, the house physician, found one end of a broken needle projecting into the upper part of the dorsal aorta; between the aorta and œsophagus was a cavity the size of a marble filled with blood clot and communicating by a small track with the œsophagus. It seems probable that the needle had first lodged in the œsophagus and had then worked its way to the aorta.

CASE 2.—A woman aged thirty-five years was taken to the hospital in a condition of extreme collapse on the evening of Nov. 9th, having suddenly fallen down in King's-cross station. When the clothes were removed a pointed projection was seen under the skin near the left border of the sternum at about the level of the fourth rib, and it was observed to move up and down with each heart beat. An incision was made over it by the house surgeon, and a needle about one and a half inches in length was removed. The patient was admitted to the hospital under the care of Mr. Berry and gradually recovered consciousness. She then stated that she had had severe pain in the left breast for two days and had noticed a "tumour." She soon became very restless, and the face, in addition to being very pale, was rather blue. Repeated examinations of the chest revealed no increase of cardiac dulness or other abnormal physical sign. Death took place a few hours after admission. At the post-mortem examination about three-quarters of a pint of blood was found in the pericardium, and close to the origin of the pulmonary artery there was a hole about a quarter of an inch in diameter through the wall of the right ventricle, which was also much scratched. It seems probable that the needle entered the body near to the spot at which it was found, and that it afterwards became tilted so that one end was fixed in the heart and the other projected under the skin.

Remarks.—In neither of the above cases had the patient any remembrance of swallowing a needle or being pricked by one, and the condition in the man was unsuspected until revealed at the post-mortem examination. Death in both instances was due to hæmorrhage.

WEST HOSPITAL, RAJKOT.

A CASE OF HAND- AND SHOULDER-PRESENTATION WITH SPONTANEOUS EVOLUTION.

(Under the care of Surgeon-Major C. MONKS.)

THIS case illustrates an unusual form of presentation and lends additional force to the opinion expressed by the author of one of our text-books on midwifery. "The mechanism of spontaneous evolution, since it was first clearly worked out by Douglas, has been so often and carefully described that we know now precisely how it occurs. Although every now and then a case is recorded in which a living child has been born by this means, such an event is of extreme rarity,

and there is no doubt of the accuracy of the general opinion that spontaneous evolution can only happen when the pelvis is unusually roomy and the child small, and that it almost necessarily involves the death of the fœtus on account of the immense pressure to which it is subjected."[1] For the notes of the case we are indebted to Mr. Dolatrai Dahyabhai, hospital assistant.

A fairly well-built young woman about sixteen years of age, a primipara at full term, was brought to the hospital by her parents at 6 A.M. on Aug. 2nd, 1896. Her face was anxious, the skin was abnormally warm, and there was uterine inertia. Her general condition was weak and exhausted. The right arm, together with the right shoulder, of a child was protruding from the vagina. The palm of the hand was looking forwards and the shoulder was firmly pressed down, showing a considerable distance outside the vaginal orifice. The protruding parts were very much swollen. The child was dead. Labour pains were said to have commenced about twenty-four hours before her admission—i.e., at 6 A.M. on Aug. 1st—and rupture of the membranes took place some time before noon of the same day. She was attended by a country dai. The whole arm as far as the shoulder presented, and, as the dai could not effect delivery the parents about midnight sought the assistance of a medical man, who advised them to take the patient to the above hospital, which was done at the time already specified. About five minutes after admission she began to strain forcibly, with regular bearing-down pains, upon which the thorax and left shoulder came down, followed, after a few more sharp pains, by the head, body, and left arm *en masse*, the left side of the face pressed closely against and into the child's abdomen, and the left arm was doubled up, as shown in the accompanying illustration. The pelvis and lower extremities followed at once. A little later the placenta was extruded. There was no hæmorrhage, and no injury of any kind to the soft parts of the passages occurred. No chloroform was given.

Remarks by Mr. DOLATRAI DAHYABHAI.—The body of the child after birth naturally fell into the position shown in the illustration—a position to which it had been moulded in the maternal passages. The fœtus was of full term and length, although thin, as shown by the weight, and the head was of the normal dimensions, which renders more remarkable the position in which the child was born. The mother was, as above stated, about sixteen years of age, about 5 ft. 2 in. in height, and with a well-developed pelvis, the diameters of which, however, it was impossible to take. The head and neck being bent back against the trunk was the result of the presentation and not connected with any deformity of the child, which was of normal build and shape. The weight of the fœtus was 5 lb. 2 oz. and the length was 1 ft. 6 in.; the occipito-frontal diameter was 4½ in. and the bi-parietal 3½ in. I am much obliged to Surgeon-Major C. Monks, medical officer, Kathiawar Political Agency, and in charge of the hospital, for kindly permitting me to report this case.

[1] Playfair, vol. i., p. 413.

VICTORIA HOSPITAL FOR CHILDREN.—On Wednesday, Nov. 18th, a quarterly court of governors was held in the board room of the hospital to receive a report of the financial and general state of the hospital from the committee of management. Viscount Clifden and Mr. S. Symons were elected life governors. Sir William Broadbent, Bart., M.D. Lond., was elected consulting physician to the hospital. Viscount Clifden was unanimously elected a member of the committee of management.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

A Case of Amnesia of Eighteen Years' Duration, with Necropsy.

A MEETING of this society was held on Nov. 24th, Dr. W. H. DICKINSON, President, being in the chair.

Dr. BASTIAN described the case of a right-handed man who had an attack of Right Hemiplegia with loss of Speech in December, 1877, who came under his care in March, 1878, and who had since been frequently under observation up to the month of March of this year, when he died in consequence of another apoplectic attack—this time due to thrombosis of the right middle cerebral artery. In 1878 he was found to be incompletely paralysed on the right side, and there was also incomplete hemianæsthesia on the same side. He had slight convulsive attacks from time to time up to 1883. There was then an interval of twelve years, but during the last year of his life he had three severe fits, each of which was followed by a temporary aggravation of the paralysis of the right side. During the last two years of his life there had also been an increase in the hemianæsthesia of the right side. Within two months of his coming under observation his speech defects assumed the form which they preserved during the next eighteen years with remarkable constancy. He was admitted into University College Hospital many times, and independent examinations by excellent observers always showed the existence of substantially similar speech defects and mental disabilities. These may by thus briefly described. His voluntary speech was throughout limited to a very few words, though he could repeat words which he heard, and he understood everything that was said to him. This limitation of speech was judged to depend upon an impaired activity of the auditory word-centre. He spent much of his time in reading and undoubtedly understood what he read. He could not, however, read a single word aloud, nor could he write a single word from dictation, though he could copy the same word readily with his left hand when he had it written before him. His inability to read aloud or name at sight, whilst he could understand what he read and repeat words, was considered to point to the existence of a defect in the visuo-auditory commissure, whilst his inability to write a word from dictation, coupled with his ability to copy the same word, seemed to show a similar defect in the other half of the commissure (the audito-visual) between the auditory and the visual word-centres. In addition to the above-mentioned defects there was also an aphemic difficulty of utterance. The unaltered existence of all these troubles was verified even as late as one month before his death. On examination of the brain complete atrophy of the convolutions in the territory supplied by the left middle cerebral artery was found. The atrophy had also extended inwards so as to lay open the lateral ventricle, so that the whole of this region was occupied by a large pseudo-cyst. The supra-marginal and angular gyri, as well as the posterior two-thirds of the upper temporal convolution, were included in the parts which had completely disappeared. The case is regarded as a very remarkable one on account (1) of the complete destruction of the supra-marginal and angular gyri and the posterior two-thirds of the upper temporal convolution without the occurrence of word-blindness or word-deafness. It is presumed that the atrophy of these convolutions must have occurred at some unknown period during the course of the patient's illness; that it must have occurred gradually; and that functional compensation must also have been gradually brought about through the further development of the corresponding centres in the opposite hemisphere. But even on this supposition the case is most remarkable owing to (2) the constancy of the speech defects over a long series of years and because of the very exact way in which the original defects were maintained after some of the functional activity of the lost parts had been transferred to the opposite hemisphere.

Sir WILLIAM BROADBENT said that there was considerable difficulty in undertaking the discussion of this case. He

could not accept the view suggested by Dr. Bastian that there had been a progressive change in the left hemisphere, variations in the patient's condition being accounted for, as Dr. Bastian had suggested, by changes occurring in the internal capsule, or, as he thought, by variations in pressure in the large cyst and ventricle. The salient feature of the case was that he could understand spoken and written language, differing in this respect from the word-blindness and word-deafness of ordinary aphasia. This difference showed the distinction of the sensory and motor parts of the speech mechanism, and thus the centripetal paths to the auditory and visual centres were open. There was no fault in the auditory or visual perceptive centres, and it was only when these were to be expressed in words that failure occurred. According to his interpretation the whole defect is motor and not sensory, and except for the power of imitation the case might have been one of aphasia. It was clear that the "way out" (a term used by Hughlings Jackson) was not broken, and this patient could repeat spoken words which an aphasic patient could not do. The motor and auditory centres were intact; the higher path between these two centres passing through the patient's mind was interrupted, but the lower path was still intact. It was necessary to refer to his idea of the mechanism of speech. The sensory processes always educated the motor. When visual and auditory impressions reached the marginal convolution there was an elaboration of sensation into a perception which is a rudimentary mental process implying the source of the sensation. When an idea is elaborated there is a convergence of impulses from the various centres on to one point which he called the naming centre, such a centre being in connexion with a propositionising centre, which again used the motor speech centre for the expression of language, and he considered the lesion in this case to be due to damage occurring between the naming centre and the propositionising centre. With regard to the compensating part played by the right hemisphere Dr. Bastian had given a sketch of the theory which he himself had formerly put forward concerning the bilateral association of nerve nuclei. The auditory and speech mechanism were, he considered, also bilateral.

Mr. SPENCER WATSON moved the adjournment, which was agreed to.

MEDICAL SOCIETY OF LONDON.

Motor and Sensory Aphasia.—The Uric Acid Diathesis.

A MEETING of this society was held on Nov. 23rd, Mr. REGINALD HARRISON, President, being in the chair.

Dr. ALFRED MANTLE (Halifax) read a paper on Motor and Sensory Aphasia, and related two cases in which there was a combination of motor and sensory disturbance, but it was chiefly on account of the sensory derangement of speech that he had brought them forward. Case 1 was an artist forty-one years of age who some nine years previously had had slight epileptiform attacks, after one of which paralysis of the right arm and leg and aphasia had remained; from this he soon recovered. Five years later he had another slight attack, which obliged him to relinquish active work. On Oct. 29th, 1892, without any marked premonitory symptoms, he was found in the morning perfectly conscious but speechless. The tongue was protruded to the right and there was numbness all down the right side. He was found to have complete motor aphasia. He could, however, write slowly with the right hand and his questions were intelligent and correctly written. At the end of the first week the paralysis of the right side was complete both for motion and sensation, and sensation was also diminished on the left side. From the third week he regularly improved, gaining steadily more power in the right leg and arm and recovering sensation. He read and understood the newspapers, but there was no improvement in his aphasia. Slight deafness was noticed on Jan. 19th, 1893, and on the following day it was complete. Dimness of sight was also observed, and he could not read writing, however large, but could read words composed of child's large printed letters. Later in the afternoon he became unable to do even this. On the following day sight and hearing were both gone on both sides, though light excited the pupillary reflex. He had difficulty in swallowing. He continued deaf and blind for ten days. Fourteen days later he heard sounds at a distance and could see things some distance away. He could neither see things nor hear noises close to him. His mind continued to be very clouded. Feb. 9th was the last day he made known his thoughts by drawing with his finger the outlines of letters forming words. After that he could only express his thoughts in pantomime. Towards the end of February there were distinct signs of recovery. Although deaf to words he interpreted tones and gestures very well. In March mind-blindness was most marked, though he had not so much difficulty in remembering objects as persons. His deafness gradually improved and was most deficient in the left. The sense of smell was impaired on the left side. He saw better, but had still word-blindness. He was able to articulate more and understood more words. He took a little more interest in things at the end of March, but he still had forgotten that he ever was a painter. His condition gradually improved from this time, but his mind-blindness did not improve; he could not remember his intimate friends or his own pictures. Early in September one morning I found hearing and sight again completely gone, swallowing was difficult, and there was also loss of sensation and power on the right side. He was completely deaf to words, but had a painfully acute hearing for sounds. The word-deafness and all vision remained absent for four weeks, and he was observed to have right hemianopsia for several months afterwards. He gradually recovered from the word-blindness and slowly regained power in the limbs, but was unable to speak until the following April, after which he rapidly regained speech, it having been absent after his partial recovery for thirty-two weeks. His mind remained a complete blank with regard to things he had done before his illness. He has tried hard to paint, but has given it up in disgust, not being able to remember how he used to do it. Contrary to Lichtheim's experience the sensory aphasia in this case of total aphasia cleared up before the motor. The second case of sensory and motor aphasia was seen in February of this year. The patient had been seen five years before, when he was suffering from paralysis of the left forearm not associated with any disturbance of speech. Between two and three years later he had another attack, and since then he has had a number of slight fits. There was a clear history of syphilis. His answer to every question was, "I really cannot tell you just now," and he evidently had no comprehension of word language. He read figures with great difficulty and could not read printed matter accurately, but could make out some letters. He could identify some objects, but not others. There was no apparent defect of sight. The motor part of speech was good and there was no paralysis. His memory was very defective. At times his writing was quite distinct, while at others quite unintelligible. He improved somewhat, but on March 24th he had another fit and was quite unable to speak. He was beginning to recover when on May 8th he had another attack. He improved somewhat, but recovery was very incomplete; there was no return of intelligible speech, and he had complete loss of power in the right hand and partial loss of power in the right leg. His present condition is pitiable, he cannot understand anything said to him, has complete motor aphasia and right hemiplegia, is very emotional, and presents all the symptoms of cerebral softening. In the first case the aphasic condition was remarkably compound and was probably due to thrombosis of the Sylvian artery. The centre for motor speech was first affected, and the ascending frontal convolution, containing the cortical centres for the movement of the tongue and lips, account for the early loss of these movements in this case. The curious fact was observed that he could hear a whisper but not a word pronounced in the ordinary voice, which I think points to over-stimulation of the centre by the ordinary voice preventing perception of sound characters. In word-blindness a lesion of the first temporal convolution is found in most cases. The hemianopsia was probably due to involvement of the occipital lobe and the amaurosis was probably also cortical in origin. I may mention that this patient also had visual hallucinations, and it has been pointed out by Bastian that lesions in the posterior parts of the brain are more apt to produce hallucination than lesions in the middle or anterior parts. In the other case I may note that the sensory aphasia came on first and there was, as far as could be made out, no hemianopsia with the word-blindness.—Mr. SPENCER WATSON thought that the intellectual disturbance was so great in the cases quoted by Dr. Mantle that the term aphasia was hardly justified, and he would prefer to call the condition amnesia, such as one frequently meets with in transitory intellectual disturbances.—Dr. A

MANTLE, in reply, said that he considered that the condition in his cases was true sensory aphasia, and his cases could hardly be considered as transitory as both had lasted for a long period of time.

Dr. ALEX. HAIG read a paper on the Uric Acid Diathesis and raised the question whether it should still be believed in. He said that it was held that if uric acid were given to mammals it appeared in the urine as urea, and the quantity of this substance in the human body cannot be affected by its administration or by the quantities contained in various articles of food and drink. His researches, however, proved that this is not true, and that uric acid, swallowed by man, gets into the blood and eventually appears in the urine, grain for grain, in proportion to the quantity ingested, and that this could be easily demonstrated in anyone, provided that the factors which influence the solubility of uric acid in the blood are kept in mind and controlled. This is a fact of far-reaching importance both in physiology and pathology, and medicine fortunately affords a field in which its truth can be put to the most rigid of practical tests. For if uric acid disease is largely due, not to excessive formation of this substance, but to its introduction (previously considered impossible), it follows that as introduction can be completely controlled, so can the diseases due to the excess of uric acid in the blood and body. And in practice this is found to be the case, for Dr. Haig has not only completely freed himself from "the diathesis," but has also been able to help a very large number of fellow sufferers to obtain equally complete and permanent freedom. A curve was shown to illustrate the effects of the daily introduction of uric acid on its excretion, and another curve to show what can be done by stopping as completely as possible all introduction. Stoppage of introduction gives complete freedom from disease after the accumulations previously in the body have been got rid of; but freedom lasts only so long as there is no introduction; the moment uric acid in any form is again taken its toxic symptoms will return. In the face of these facts the proof that any uric acid disease is due to excessive formation becomes almost a vanishing quantity, and in place of a shadowy diathesis full of unknown possibilities which constantly elude our grasp we have a well-defined group of toxic symptoms due to a well-known substance contained in many of our foods, but which can, fortunately, be easily eliminated from our diet without injury to nutrition. The toxicity of uric acid and the xanthins has, from partial ignorance of their properties and from their effects being too often credited to other causes, been largely overlooked; but the above facts amply suffice to demonstrate it and it can now be easily demonstrated by anyone who cares to do so. When it has been sufficiently demonstrated Dr. Haig believes that "the uric acid diathesis" will come to be regarded as a myth.—Dr. J. RAGLAN THOMAS said that from practical experience both in himself and in various patients on whom he had tried the diet recommended by Dr. Haig he had found considerable benefit therefrom. He quoted the case of a girl who had had pleurisy with effusion, albuminuria, increased arterial tension and headache, in whom no improvement took place until the nitrogenous diet on which she had been kept was stopped and a simple non-nitrogenous diet was substituted, when she rapidly recovered. He asked if all uric acid were excluded from the diet whether any uric acid would be passed in the urine?—Dr. SAVILL asked Dr. Haig whether he had tried a diet absolutely free from all uric acid and had found the urine absolutely free from all uric acid. He considered that if this were so then Dr. Haig's assumption would undoubtedly prove correct. In reference to the methods employed he doubted whether Haycraft's method was reliable, and asked Dr. Haig whether he had verified his results by other methods.—Dr. R. FORTESCUE FOX mentioned the fact that children always pass a large amount of uric acid even when on a simple diet; he thought Dr. Haig had not distinguished between the two conditions—(1) dependent on diet; and (2) on inherited tendency to the production of uric acid in the system.—Dr. VAUGHAN HARLEY said he regarded the diet given by Dr. Haig rather as treatment of the disease than as a diet. He pointed out the fact that all children passed more uric acid in proportion to their body weight than adults, and that as the age increases so the relative amount of uric acid excreted diminishes; and he asked Dr. Haig if he knew of any evidence showing that a healthy old man had more uric acid in the body than a young man. The increase of uric acid in leucocythæmia was well known, and as much as from 4 to 6 grammes might be passed in the day. An experiment had been tried by giving a patient suffering with leucocythæmia and a normal individual exactly the same diet, and it was found that the leucocythæmic patient passed four times as much uric acid as the healthy man. He referred to the fact of increase of uric acid in malignant disease of the liver, and said that he should hesitate to make such a diagnosis unless such an excess of uric acid were present.—Dr. EWART fully recognised the value of Dr. Haig's work, but he did not consider the question of "diathesis" had been definitely settled by his researches. He referred to the fact that many people were able to take a large quantity of nitrogenous food and yet passed no excess of uric acid, while on the other hand there were others who, when they took any excess of nitrogenous food, passed a considerable quantity of uric acid in the urine. He alluded to certain experiments which he had performed in which he found that uric acid was not altered in the stomach, but that when it came into contact with the pancreatic secretion it became soluble. He thought there were grounds for thinking that uric acid was formed in the body and was not a constant quantity in all persons, but in the gouty the rate and amount of formation was in excess. In regard to the toxicity of uric acid, given as a solid it seemed to be almost inert, and in solution it is not toxic in animals.—Surgeon-Lieutenant-Colonel FREYER asked Dr. Haig if he could give any explanation of the fact that in India where the diet consisted almost entirely of bread, lentils, &c., stone in the kidney and bladder should be so common.—Dr. SHUTTLEWORTH referred to the experiments of Bouchard thirty years ago, in which he gave uric acid to animals and produced no toxic effect. He asked whether the toxic effects might not be due to certain bodies of the xanthin group formed at the same time.—Dr. HAIG, in reply, said that in relation to Bouchard's experiment he had tried injecting uric acid into the vessels of animals, and although they were killed in a few minutes he was unable to find any excess of uric acid in the blood. The toxic symptoms in man do not occur for some twelve to twenty-four hours after the excess of uric acid has been taken. He had always used Haycraft's method for estimating his uric acid as it gave him uniform results.

EPIDEMIOLOGICAL SOCIETY.

Presidential Address on Infectious Disease in the Tropics.

A MEETING of this society was held on Friday, Nov. 20th.

Professor LANE NOTTER, taking as the subject of his Presidential address the Endemic Prevalence of Infectious Disease in the Tropics, remarked that he would discuss not the diseases of the tropics—malarial, parasitic, or other—but such only as were endemic in comparatively limited areas and became from time to time epidemic over a larger extent of the earth's surface. He should consider the climatic conditions which characterised the focus and those which seemed to limit and to determine the spread of the disease. Cholera thus had its home in Lower Bengal, yellow fever in the West Indies and in the opposite coast of Mexico and South America, and the plague was now restricted to Mesopotamia and the Euphrates valley. Cholera had, since the beginning of this century, overrun the greater part of the tropical and temperate zones excepting the most northerly, Australia, the western side of North and South America, and West and Central Africa. Yellow fever had established itself on the West Coast of Africa, where it was often confused with the fatal forms of malaria, and it had crept along the eastern shores of North and South America, even to temperate zones in favourable seasons, and had been carried to European seaports, though it always failed to obtain a footing there. As to cholera, Professor Notter thought that in many parts of Bombay and Madras it was really autochthonous, though lying dormant in the soil perhaps for years. A careful examination of the geological, physical, and meteorological characters of the provinces of India, the Mediterranean and American stations of the British army, and the seasonal prevalence of cholera, convinced him that the chemical composition of the soil was of no importance and that temperature was a secondary consideration, the essential conditions being a soil moist, but not saturated, charged with organic matter, vegetable rather than animal, and a ground temperature at 6 ft. of not less than 60° nor more than 80° F. It was not the rainfall or the actual level of the ground water

that determined the outbreak except so far as the essential conditions of moisture—from 20 per cent. to 60 per cent. of saturation and temperature of from 60° to 80° F.—depended thereon. The most favourable conditions being from 40 per cent. to 50 per cent., with from 70° to 75° F., cholera might thus prevail in the warmer or the cooler season or before or after the rains, and a sudden heavy rainfall should be followed by an outbreak, or by the cessation of an epidemic; the hotter months at the end of the dry season being frequently a time of special mortality in Bengal, as is the rainy season in those districts where the climate is less humid. It was probable that, in regions where epidemics occurred at long intervals and apparently *de novo* in the absence of all evidence of imported cases, the bacillus, which as we knew was unable to resist desiccation, assumed the character of a resting spore or remained in some other form unrecognised until called again into activity by changed conditions of temperature and moisture. The presence of decomposing vegetable matter in the soil seemed to favour its development, but the saprophytes of animal matter were antagonistic; in fact, it could not exist with an excess of fæcal pollution, whether of soil or water. For its extension to regions where it was not endemic human intercourse was an essential factor, but once introduced its spread and virulence depended on the degree in which the conditions of the soil resembled those of its home. Important as was the provision of a pure water-supply, even more necessary was what Pettenkofer called the "healing of the soil." Yellow fever endemic in the West Indies and on the coast of West Africa was epidemic in both North and South America, but in its progress it never extended beyond the banks or deltas of rivers and lagoons and the harbours on the coast, haunting the foul mud of their beds and foreshores, and stagnant blackish waters. The nature of the soil was of no importance, but a high temperature and putrefying mud were necessary to its spread. It had been conveyed by cargoes or ballast to European ports, but had never attacked others than the crews or labourers employed on board, the conditions necessary to its continuance being wanting here. There were no records of yellow fever prior to the rise of the slave trade, possibly from its having been confounded with the remittent fevers of the tropics, but Creighton's theory of its evolution from the discharge of the dysenteric evacuation of the wretched negroes and the bilgewater of the slave ships on the banks of the West Indian and Spanish American ports was certainly worthy of consideration. Though the negroes themselves enjoyed immunity the foci of yellow fever were the great ports of their debarkation, and thus viewed it might be described as a vicarious infection. The epidemic area had extended in recent years, but with improved sanitation of the seaports it had become less prevalent in those in which it was endemic. The plague at the present time was an endemic and epidemic disease, but its history in the past showed that it depended on social rather than on climatic conditions.

HARVEIAN SOCIETY OF LONDON.

Trigeminal Neuralgia and Trismus due to Loss of Teeth.—Chronic Interstitial Nephritis in Childhood.

A MEETING of this society was held on Nov. 19th, Mr. E. W. ROUGHTON, Vice-President, being in the chair.

Mr. J. SEFTON SEWILL gave a short account of two cases of Trigeminal Neuralgia and Trismus due to Loss of Teeth. He said that there is an almost unrecognised condition in which, owing to absence of grinding teeth, there is loss of normal relationship between the articular surfaces forming the temporo-maxillary articulation. Consequent upon this arise reflex symptoms of a neuralgic type, usually severe and probably due to irritation of the branches of the temporo-maxillary nerve supplying the joint. The two cases described both recovered on restoration by artificial means of the lost bicuspid and molar teeth.

Dr. LEONARD GUTHRIE read a paper on Chronic Interstitial Nephritis in Childhood, mainly based on records of seven fatal cases in children aged from five to fourteen years, the diagnosis being confirmed by post-mortem examination. Granular, or small, red, contracted kidney was held to be the last stage of primary interstitial nephritis. The latter might run its course and continue for many years without definite symptoms or might prove fatal before the condition of extreme contraction is reached. The physical signs attending the disease were: (*a*) progressive emaciation and anæmia, with dryness, absence of perspiration, coarseness, and often pigmentation of the skin. Pigmentation is a valuable diagnostic sign. (*b*) Cardio-vascular hypertrophy, which was generally present and was believed to be directly antagonistic to dropsy, because dropsy is for the most part conspicuously absent in interstitial nephritis, in which disease cardio-vascular hypertrophy is most perfectly developed. (*c*) The *modus operandi* of cardio-vascular hypertrophy in preventing dropsy was believed to be the delivery of smaller quantities of blood at a higher rate of speed than normal into the capillary area. Stagnation in the capillaries was thereby lessened, and also transudation through their walls, the nutrition of which was lowered and the permeability increased by circulation of impure blood. (*d*) Hypertrophy of the muscular coats of the arterioles was held to be due to the exercise of constant muscular contraction in order to reduce the capillary blood-supply, and hypertrophy of the heart to the effort to overcome the resistance in front caused by contracting arterioles. If the heart failed to meet the demand backward pressure in the veins and capillaries occurred and dropsy was the result. (These views were chiefly based on Sir George Johnson's researches.) The symptoms were enumerated under the headings of (1) cerebral symptoms, including headache, vertigo, vomiting, convulsions, tetany, amaurosis, and cerebral hæmorrhage; (2) gastro-intestinal symptoms, consisting of easily excited attacks of vomiting and diarrhœa, not necessarily uræmic, constipation, epigastric and abdominal pain, and peritonitis; (3) urinary symptoms, including polyuria, often associated with thirst and sometimes with enuresis, low specific gravity of urine, albuminuria, and hæmaturia; (4) pulmonary symptoms, such as dyspnœa, bronchial catarrh, pulmonary œdema, and asthma; (5) cardiac symptoms, such as præcordial distress, pain, and dyspnœa; and (6) dropsy, which last was held to be extremely rare, but it occurred incidentally and slightly in the course of the disease and also in its last stages. The etiology of the affection was discussed under: (1) parenchymatous origin; (2) scarlatinal origin; (3) origin as an ascending or secondary nephritis dependent upon obstruction of the ureters or cystitis; (4) origin in irritation by uric acid or oxalates; and (5) origin as a primary acute interstitial nephritis. Instances of the latter in children aged between two and a half months and two years were quoted from Emmett Holt, and it was held that chronic interstitial nephritis and even the extreme condition—granular kidney—might be dependent on attacks of primary acute interstitial nephritis occurring in infancy or early childhood. Each of the other causes enumerated might, however, also lead to the disease. The earliest indications of the disease were held to be progressive wasting and anæmia, dryness and pigmentation of the skin, high arterial tension, leading to cardio-vascular hypertrophy, polyuria, with low specific gravity of urine, but not necessarily albuminuria, and sometimes enuresis. The early symptoms were gastro-intestinal disturbances, periodic attacks of headache and vomiting, mostly occurring in the early morning, slight dyspnœa and præcordial pain or distress, and sometimes extreme thirst. The prognosis largely depended upon the rapidity with which the renal mischief advanced and also upon the degree of cardio-vascular compensation present. As to the treatment, when arterial tension was high and the heart threatened to give way under the strain, vascular depressants such as nitrites and nitrates were valuable when associated with diaphoretics and active purgation. Similar treatment was necessary in extreme cases of cardio-vascular hypertrophy when headaches, hæmorrhages, and anuria were imminent. On the other hand, when the whole system of cardio-vascular compensation seemed about to fall through, treatment by cardio-vascular excitants, such as digitalis, squills, citrate of caffein, and strychnia, became necessary. These drugs were not only powerful cardiac tonics, but also acted as vascular constrictors. Eclampsia usually yielded to inhalations of chloroform and to the use of bromides and chloral. Venesection was considered dangerous in the late eclampsia of interstitial nephritis, but dry-cupping was useful in pulmonary œdema, pleurisy, and pericarditis. Finally, the guiding principle in all cases of nephritis, whether parenchymatous or interstitial, should be to watch the heart and pulse.—

Dr. SAVILL remarked that he was glad to find in the paper evidence supporting the contention that chronic Bright's disease was a renal affection and not a general fibrosis of the tissues of the body with cardio-vascular changes, such as Gull and Sutton maintained. He was prepared to go even a step further than this, for his investigations into arterial hypermyotrophy enabled him to state that cardio-vascular hypertrophy might occur as a separate affection without renal complication, and he had collected already a considerable number of such cases. The leading symptom was giddiness, and he had no doubt that the vertigo and headache which Dr. Guthrie stated were present in some of his cases were due to this condition. As regards the treatment by bleeding, he thought it was sometimes of very great value in such cases when the arterial tension was high.—Dr. G. A. SUTHERLAND was inclined to doubt the existence of a "primary acute interstitial nephritis" and to refer all cases to some toxic condition of the blood.—In reply Dr. GUTHRIE said that mercurial purgatives were undoubtedly of use, though perhaps more so in cases of cardiac than of renal dropsy. Venesection in children suffering from the final eclampsia of interstitial nephritis he thought was contra-indicated, though it might be useful in the early eclampsia of acute parenchymatous nephritis.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—The Latent Gout of the Menopause.

A MEETING of this society was held on Nov. 12th, Dr. CLEMENT GODSON, President, being in the chair.

Mr. CHRISTOPHER MARTIN (Birmingham) showed a Uterus removed by Abdominal Hysterectomy for Hæmatometra and Hæmato-salpinx, with Absence of the Vagina.—Dr. HEYWOOD SMITH thought that in such a case it would be better to dissect up to the distended sac from below and then remove by laparotomy the distended tube, leaving the uterus and the other ovary.—Mr. SKENE KEITH had seen a similar case similarly treated in New York under the care of Dr. Thomas. The distension was in one half of a double uterus.—Dr. F. A. PURCELL suggested that the stump might have been treated by the intra-peritoneal method.—After some remarks by Dr. BANTOCK and Dr. JOHN SHAW Mr. CHRISTOPHER MARTIN replied. He thought that when the vagina was absent and the genital organs were disorganised it was better for the patient that she should not have an ovary left. In this case three inches of dissection would have been necessary and it would have been very difficult to keep the passage open. Intra-peritoneal treatment of the stump would have been unwise because there was a sac below the uterus in which suppuration would probably have occurred.

Dr. H. MACNAUGHTON-JONES showed a specimen of Sarcoma of the Bladder. The patient had had symptoms of cystitis. On diagnosing the growth the urethra was dilated and the mass removed. There was no bleeding after, but septic symptoms set in, followed by suppression of urine, and the patient died on the sixth day after the operation.

Mr. W. D. SPANTON (Hanley) showed the following specimens:—1. Papillate Fibroma of the Cervix Uteri. The uterus was prolapsed and the os covered with papillate growths. It resembled malignant disease, but on amputating the cervix the microscope showed that the growth was benign. 2. Tubal Gestation removed by Laparotomy. The specimen examined after removal seemed to show an apoplectic ovum, constituting a tubal abortion.—The PRESIDENT, Dr. HEYWOOD SMITH, and Dr. SCHACHT made some observations on the specimens. The gravid tube was referred to a committee for a fuller report.

Mr. WILLIAM ARMSTRONG (Buxton) read a paper on the Latent Gout of the Menopause. He had noted patients presenting at the time of the menopause some or other of the following symptoms:—(1) Increasing stoutness with muscular flabbiness; (2) puffiness of the hands and feet; (3) mental and bodily lethargy; (4) shortness of breath on exertion with cardiac debility; (5) irritability and restlessness; (6) broken and disturbed sleep; (7) a feeling of weariness on rising in the morning; (8) dyspepsia, flatulence, constipation, and migraine; (9) various neuralgiæ, especially of the back of the head and neck; and (10) lumbago and vague muscular pains. The quantity of urine was often diminished, while at other times the patient passed large quantities of pale urine of low specific gravity. Urates were often present and nearly always uric acid in excess. At first he regarded these symptoms as neurotic; but seeing how often they were present in neurotic forms of gout he decided to try treatment adapted for this complaint. The objects of his treatment were as follows:—(1) To eliminate the waste products from the blood by means of (*a*) the skin, (*b*) the kidneys, and (*c*) the liver and bowels; (2) to disturb and disperse the morbid products in the lymph spaces, lymphatics, and muscles; and (3) to improve the state of the nervous system, especially the sympathetic portion of it. He had been much surprised and gratified by the good results he obtained from such treatment. For the first purpose he ordered the drinking of hot water or natural thermal water, and the box vapour bath; for the second purpose he used massage, or the aix douche (douche massage), or mud baths, or, if these were contra-indicated, resisted Sweedish exercises; and for the third purpose he recommended especially electro-massage. The general treatment included regulated exercise and a selected diet, the carbohydrates being eliminated as far as possible. In some cases the Salisbury diet gave good results. Local pelvic treatment should be carried out when required.—Dr. MACNAUGHTON-JONES said that the co-relation of lithæmic conditions and affections of the pelvic viscera had been dwelt on by different authorities; Dr. Matthew Mana had made it the subject of his presidential address before the American Gynæcological Society in 1895. It was in such associated conditions that those reflex irritations called "neurotic" so often occurred. Apart from these, the local disturbances, proceeding possibly from dietetic causes, were of importance to the gynæcologist. Whatever benefit might be derived from baths, electricity, and massage, it had to be remembered that this treatment was often persevered in for a length of time to the detriment of the patient, if not to the actual risk of life. Local diseased states were temporised with, and the last state of the woman was worse than the first when she came to be operated upon.—Mr. ARMSTRONG, in reply, said he had come to the conclusion that as regards diet they must in bad cases keep to one kind of food or the other; it was the mixing of dietaries that was bad. And when nerve force was wanting he thought a course of carbohydrates was dangerous; in neurotic gout much nitrogenous food was required, and the Salisbury diet was then worth consideration.

LIVERPOOL MEDICAL INSTITUTION.

Addison's Disease.—Tuberculous Ulceration of the Larynx.—Cases of Hydatids of the Liver.—Fibroma of the Ovary and Ovarian Ligament.

A MEETING of this society was held on Nov. 19th, Dr. RICHARD CATON, President, being in the chair.

Professor BOYCE showed as a card specimen the Internal Organs from a case of Addison's Disease.

Dr. PERMEWAN read the notes of a case of Tuberculous Ulceration of the Larynx. A man aged forty-six years had an ulcer involving the left vocal cord, which had existed for six months. There were numerous tubercle bacilli in the sputum and slight involvement of one lung. Dr. Permewan applied lactic acid (60 per cent.) to the ulcer about twelve times and treated the patient with guaiacol internally and creosote inhalations. At the end of four months the ulcer had healed, with disappearance of the laryngeal symptoms. The patient gained 4 lb. in weight. This was a favourable case for treatment, the disease being limited; however, apparently favourable cases did not always do well.—Mr. BARK considered it interesting that only one cord had been affected. Unilateral tuberculous infiltration usually attacked the ventricular band.—Dr. HUNT thought that the disease was almost invariably unilateral in the early stages. Temporary healing must not too quickly be regarded as a cure.

Mr. G. G. HAMILTON read a note on cases of Hydatids of the Liver. He gave an account of a number of cases of hydatid disease which had come under his observation. He quoted recent statistics from Australia. He had seen a number of cases of hydatid disease of the liver in the post-mortem room. Three points he called attention to—namely, (1) that in many cases, although the hydatid was large, no inconvenience occurred; (2) that in many cases hydatid was not diagnosed; and (3) that the bile ducts were often the seat of the disease where it was multiple. This accounted for the biliary fistulæ which frequently resulted after operation. Tapping was condemned except as a preliminary to incision. Three cases of hydatid disease of the liver were

then related in detail. One patient, a boy aged twelve years, had a tumour the size of the closed fist in the left lobe of the liver. This was explored and considered suitable for excision. Recovery was uneventful and he was discharged in a month.—Dr. P. DAVIDSON, referring to hydatid of the liver in children, believed that repeated tappings were frequently successful. In one case tappings had failed to cure, but a more radical operation of incision, drainage, and syringing had effected a cure. He had seen this patient fifteen years after the operation and the cure was complete. He thought tapping should be tried before resorting to the more serious operation described by Mr. Hamilton. He wondered if hydatids were ever conveyed by infected cow's milk.

Mr. BRIGGS read a paper on Fibroma of the Ovary and Ovarian Ligament founded upon Eight cases of Fibroma of the Ovary and one of the Ovarian Ligament. Naked-eye specimens and microscopic sections of the tumours were shown. They were large. The structure varied; in two there was a large proportion of fully formed fibrous tissue and in five the cellular elements predominated. Partial mucoid degeneration was present in one and calcareous degeneration in another. A study of the cellular elements raised the question of innocency or malignancy in the growth and showed the necessity of clinical information, especially the after-histories of the patients. He thought that amongst the primary solid growths of the ovary the fibromata held a more prominent position than was usually ascribed to them. An unpublished paper by Alban Doran was quoted from which the above conclusions were adopted. The fibroma of the ovarian ligament consisted of dense fibrous tissue. In a similar case Penrose considered the growth to be a sarcoma, but with Doran Mr. Briggs was inclined to believe that in the pathological examination cellular elements were misconstrued by the observer.—Dr. IMLACH thought that the suspicion of malignancy in ovarian fibromata was quite gratuitous. They were tumours of the stroma and of the fibrous tissue of the hilum. Hence they contained spindle cells and involuntary muscular fibres. When a tumour includes the germinal layer of the ovary it becomes cystic. The proportion of malignancy varied in different districts. There was no anatomical element by which it could be diagnosed, and hence the final decision must rest with the clinician rather than with the microscopist. Although these fibrous tumours were commonly harmless it was good and safe practice to remove them if they troubled the patient either mentally or bodily.—Dr. GRIMSDALE thought that the subject of solid tumours of the ovary was one of great interest and one which required some elucidation. The opinion was gaining ground that those tumours which had been formerly considered to be sarcomata because of their microscopical appearances ought now to be classed as fibromata. He had three and a half years ago removed a solid tumour of the ovary four pounds in weight from a girl aged sixteen years. This tumour under the microscope gave the appearances of a carcinoma, but the tumour had not returned and the girl was now in the best of health. Had this tumour been clinically as well as microscopically a carcinoma, the after-history would have been very different.—Mr. BICKERTON remarked that the time had evidently not yet arrived when microscopists could truly say that a growth was or was not of a malignant nature. He had recently removed a tumour from the outside of an eye in the case of a child aged eight years, and as on the nature of the growth depended the removal or not of the entire eyeball he took the precaution to divide the tumour in order to obtain two independent opinions. One gentleman wrote: "Sections show inflammatory tissue and not a new growth," and the other stated it to be "a sarcoma."—Dr. GARRY did not agree that fibroid tumours of the ovary were so rare as Mr. Briggs considered, and he quoted from Churchill's experience fifty years ago in order to confirm this view.—Dr. E. T. DAVIES, Professor BOYCE, Dr. HILL, Dr. PERMEWAN, Dr. MACDONALD, Dr. O'HAGAN, and Dr. FINEGAN took part in the discussion.—Mr. BRIGGS replied.

MANCHESTER PATHOLOGICAL SOCIETY.

Exhibition of Specimens.—Method of Staining Sections from the Nervous System.

A MEETING of this society was held on Nov. 11th, Dr. THOMAS HARRIS, President, being in the chair.

The PRESIDENT exhibited a specimen of Chronic Pleuropneumonia (non-tuberculous) with Bronchiectasis from a case of Diabetes. The affection had developed between six and seven months before the patient died whilst he was under observation in the Manchester Infirmary for diabetes. The sputum during life, though repeatedly examined, failed to show any bacilli, and guinea-pigs inoculated with the expectoration did not develop tuberculosis. The President referred at length to the forms of phthisis which occurred in diabetic subjects, and expressed the opinion that by far the majority of cases of destructive lesion in the lungs of diabetics were tuberculous, but that as a rarity one did meet with a non-tuberculous destructive lesion which could not be classed as an ordinary phthisis or as a pulmonary gangrene. He considered it, however, questionable whether such non-tuberculous destructive lesions were more common in diabetic subjects than was the case with people who had no sugar in the urine. Although he had been on the look-out for fifteen years for a specimen of a non-tuberculous destructive pulmonary lesion in a diabetic subject, which lesion could neither be classed as a tuberculous phthisis nor as a pulmonary gangrene, this was the first specimen he had met with. The case was also interesting in that the sugar disappeared from the urine about six weeks before death and did not reappear, and at the post-mortem examination very extreme atrophy of the pancreas was found.

Dr. BURY showed specimens of a Tuberculous Tumour of the Right Optic Thalamus. The patient, aged forty-four years, began to be troubled with dizziness; soon after this his left hand became weak and then his left leg. His sight began to fail and he had headache and occasional vomiting. Six months from the onset there were left hemiplegia, optic neuritis, and nystagmus, but no anæsthesia or hemianopsia. The localised paralysis (left hand) at first and the absence of clonic spasms suggested a subcortical tumour. The skull was trephined, but no tumour found. Death occurred two months later, the duration of the illness being about eight months. Dr. Bury spoke of the occasional difficulties in diagnosing between tumours involving the basal ganglia and the subcortical region, and referred to three other cases of importance in this respect.

Mr. J. E. PLATT showed two specimens of Traumatic Aneurysm of the Radial Artery removed by excision. In both cases the aneurysm had been caused by a wound of the wrist incompletely dividing the radial artery, and in both the artery had not been ligatured at the time of the accident. The sacs were excised after ligature of the arteries above and below and the patients made uninterrupted recoveries. Both specimens were examples of the circumscribed variety of traumatic aneurysm.

Dr. R. T. WILLIAMSON drew attention to Heller's Method of Staining Nerve Fibres in Sections of the Spinal Cord and other Tissues. The tissues were hardened in Müller's fluid and embedded in celloidin. The sections were placed for half an hour in a 1 per cent. osmic acid solution, then washed in water and placed in pyrogallic acid (photographic solution) for a short time until they were deep black. They were then washed in water, placed in a potassium permanganate solution (about ¼ per cent.), washed, bleached in a 1 per cent. oxalic acid solution, washed, stained with some contrast stain (eosin or carmine), cleared, and mounted in Canada balsam. The myelin of the nerve fibres was stained very deep black, the fibres were very sharply and beautifully defined, and the results were almost equal to those obtained by Weigert's method, whilst the staining could be completed much more rapidly.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Malignant Disease of the Colon.—Large Malignant Adenoid of the Ovary successfully Removed.—Hysterectomy for Fibro-myoma of the Uterus.—Hydronephrosis.—Exhibition of Cases.

A MEETING of this society was held on Nov. 3rd, Mr. GODFREY CARTER, President, being in the chair.

Dr. GLADSTONE read the notes of a case of Malignant Disease of the Colon. A married woman aged twenty years was admitted to the Bradford Infirmary with a swelling in the left side of the abdomen. This was separate from the liver, the dulness being continuous with that of the spleen.

Later signs of acute intestinal obstruction developed, and the patient died seven weeks after the first onset of the symptoms. Post mortem a growth was found encircling the splenic flexure and the adjacent portion of the transverse colon. The wall of the gut was three-quarters of an inch thick and its lumen admitted the little finger. Microscopically the growth was a columnar epithelioma which had undergone colloid degeneration.

Dr. RABAGLIATI read the notes of a case of Large Malignant Adenoid of the Ovary in which he had operated, the patient recovering. A married woman aged thirty-seven years was admitted to the Bradford Infirmary with an abdominal tumour, being also pregnant about six months. On admission she was very ill with fever, quick pulse, and abdominal pain. The tumour was a large one, filling the right side of the abdomen and pushing the uterus over to the left. After being in the Infirmary about a month her general condition improved considerably and laparotomy was performed. On opening the abdomen the uterus presented, and to its right a large elongated tumour was seen dipping into the pelvis and free from adhesions. It was brought out of the wound and the pedicle clamped, transfixed, and the vessels tied. The wound was closed without a drainage-tube. On the same day the patient aborted, a fœtus being expelled by breech presentation. The child only lived two hours. The patient made a good recovery. Microscopically the growth was found to be a malignant adenoma of the right ovary. Three weeks after the operation a return growth was noted, not only at the seat of the pedicle, but also in the pelvis, filling up Douglas's pouch.—Dr. RABAGLIATI also read the notes of a case of Fibro-myoma of the Uterus in which Hysterectomy was performed. The patient was forty-nine years of age and had suffered from metrorrhagia, and there was a large abdominal tumour reaching above the umbilicus. Abdominal section was performed and the uterus and tumour were removed; the intra-peritoneal method of treating the pedicle was adopted. No drainage-tube was used. Four days afterwards the patient died, never having rallied from the shock of the operation.—Dr. RABAGLIATI likewise described a case of Hydronephrosis. A woman aged forty-six years had had an abdominal swelling for twelve months, the tumour filling the left renal region. Abdominal nephrectomy was performed and death ensued on the seventh day.—The cases were discussed by Mr. HORROCKS, Dr. ANGUS, Mr. MERCER, Dr. GOYDER, and Mr. MORTON, and Dr. RABAGLIATI replied.

The following cases were exhibited:—

Dr. T. JASON WOOD: A boy aged twelve years with symptoms of Disseminated Sclerosis.

Dr. B. B. MORTON: A typical case of Sporadic Cretinism, the coarse skin, protruding tongue, and umbilical hernia being all well marked.

Dr. H. T. CAMPBELL: A child suffering from Spastic Paraplegia.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

THE second meeting of this session of the above society was held in the Royal Infirmary, Newcastle-on-Tyne, on Nov. 12th, Mr. WILLIAMSON, President, being in the chair.

Dr. OLIVER showed a woman thirty-six years of age, anæmic, and half-starved, whose ears were boxed a fortnight previously. On admission she had a hæmatoma the size of a large walnut in each ear. The shrinkage was producing the ordinary deformity so often seen in lunatics. There was no mental disease.

Dr. A. E. MORISON showed a boy sixteen years of age who had fallen on his elbow five months before the operation. The olecranon was freely moveable and was separated from the upper end of the ulna three-quarters of an inch. There was inability to extend the forearm and much weakness and wasting of the muscles, especially the triceps. A longitudinal incision was made over the elbow posteriorly and the ends of the upper and lower fragments were sawn off. In doing so the elbow joints were opened. The bones were brought into apposition by two strands of silver wire passed through a hole drilled in each and the wound was closed without drainage. In ten days it was entirely healed. At the present time the movements of the arm were perfect, but it was still a little weak. The union was so firm that it would have been regarded as natural if the skiagraph had not shown a clear line at the junction of the apposed surfaces. He considered that this was cartilage and would ultimately become bone.

Dr. V. RUTHERFORD showed a boy with Patches of Seborrhœtic Dermatitis on his Thighs and Arms and distinct Patches of Tinea Tonsurans on his Head. He also showed a girl with an Eruption like Chilblains on her Fingers and Toes which had been present since infancy. It had spread slightly on to the palms and soles, and two years ago a patch appeared under the left eye. The cicatricial patches present suggested that the disease should be called Lupus Erythematosus. He likewise showed three women suffering from Scaly Eruptions of the Palms.

Dr. DAVID DRUMMOND showed a soldier aged thirty-seven years who after a few days of mental depression and abstraction was in April, 1895, during sleep, suddenly Paralysed in his Right Arm and Leg. He had no defect of speech. The paralysis lasted for twelve days, when it quite disappeared. His memory had been bad since. A second similar attack occurred in October. The same side was affected and the paralysis lasted for eighteen days, and he returned to duty until January, 1896, when he had a third attack affecting the right side and had been unable to do duty since. On July 29th a fourth attack occurred. This time the left side was affected and he became unconscious. On the same occasion he lost the power of speech and had never uttered a word since. His tongue and face and larynx were paralysed and his tongue and pharynx were insensitive. Both abductors and adductors of the vocal cords were paralysed. In addition to the nerve lesions both hemispheres were probably involved. There was no optic neuritis and the patient was not aphasic, for he could read, understood what was said to him, and could express himself in writing. He carried a pocket-handkerchief in his hand as bulbar cases do. The condition was one likely to be benefited by iodide of potassium.

Mr. RUTHERFORD MORISON showed a man who had been brought forward at the last meeting of the society previously to operation with a much Dilated Stomach. On opening his abdomen the dilatation was found to be due to an obstruction at the pylorus. His stomach was attached to his duodenum by a tube about half an inch in length the size of a crow quill. On opening the stomach an ordinary director, which was firmly gripped, was passed through the narrow channel connecting the stomach with the duodenum. The stomach and the duodenum were then freely opened and a large communication was established with sutures between the one and the other. Though he was a well-made man 5 ft. 9 in. high he was much emaciated when previously brought before the society and weighed only 6 st. 1 lb. He had also for a year been living on milk and beef-tea and was sick every day. He now, scarcely a month after the operation, weighed 7 st. 12½ lb., was able to eat and enjoy anything, and was never sick. This was the sixth similar case in which he had operated. All of the patients had recovered from the operation. Four were as successful as the last two cases exhibited. Two had not benefited to the same extent. Mr. Morison also showed a case of Tumour of the Face for diagnosis.

The President showed a man who was admitted to the infirmary on Oct. 13th, 1896. A small chip of metal struck him in the bend of the elbow four weeks previously and blood spurted out. The bleeding was controlled by pressure, and in a week the wound healed. He observed nothing wrong for a fortnight, when he went to work and felt pain down the arm. A week later he discovered the swelling and went to the infirmary. All the signs of an aneurysm (the size of a walnut) of the brachial at the bend of the elbow were found. The artery was tied above and below and the whole sac dissected out. The metal chip was embedded in the aneurysm. The specimen was shown. The patient did well.

Mr. WALTER RIDLEY showed a young man who was admitted to the infirmary suffering from a Fœtid Discharge from the Ear, with high fever and recurrent rigors on the eighth day of his illness. An incision was made over the indurated jugular vein in the neck and the vein was exposed and opened. It was filled with purulent fœtid clot as far down in the neck as it was possible to follow it. A ligature was tied round its lower portion and the skull trephined over the lateral sinus. A subdural abscess was opened and a quantity of bare bone discovered. The sinus was only blocked in its mastoid portion.

The temporo-sphenoidal lobes and cerebellum were explored with a hollow needle, but nothing further was discovered. The patient had made a good recovery and was quite well except for a sinus in connexion with diseased bone.

Dr. A. E. MORISON showed a number (several hundred) of mixed-sized Gall-stones removed from the gall-bladder of a woman who suffered from frequently repeated attacks of gall-stone colic. She had no jaundice and no marked distension of the gall-bladder. There were no stones in any of the ducts. He had sutured the opening in the gall-bladder and returned it into the abdominal cavity, leaving a drainage-tube in the pouch under the liver from the loins. The patient made an uneventful and rapid recovery.—Dr. A. E. MORISON also showed a Stone removed from the Common Duct of a patient who had been operated upon five years before. At the previous operation five years ago it appeared that a large number of stones had been removed from the gall-bladder, but a biliary fistula resulted and nothing that had been tried would make it heal. At the second operation, performed by himself, the single stone exhibited was found near the end of the common duct. After its removal the biliary fistula soon healed and the patient was restored to health and comfort. How did such a case bear upon Mr. Treves' statement, that gall-stones in the ducts would spontaneously escape if a biliary fistula was left by operation?—Dr. A. E. MORISON further showed typical specimens illustrating different varieties of Ectopic Gestation. He thought that it was much more common than was generally supposed and that a fatal result too frequently followed failure to recognise it.

Dr. GOWANS showed the Uterus from a successful case of Total Extirpation. The vagina was so narrow and the broad ligaments so tense that the ordinary vaginal hysterectomy was inapplicable. The fundus uteri was excised from the abdomen and the cervix from the vagina. The specimen was one of carcinoma of the cervix and the patient made a good recovery.—Dr. GOWANS also showed a number of gall-stones removed from the bladder of a woman who passed hundreds of enteroliths from her bowel. The enteroliths were at first thought to be gall-stones, but analysis had shown their true nature. The patient had not taken olive oil.—Dr. GOWANS also showed two Perforated Appendices from patients with acute peritonitis. In one case the peritonitis had become general and the patient died. The other made a good recovery.

Dr. GEORGE MURRAY exhibited microscopical specimens illustrating Different Conditions of the Thyroid Gland.

EDINBURGH OBSTETRICAL SOCIETY.

Chloroform in Midwifery Practice.—Transverse Septal Atresia of the Lower Third of the Genital Tract.—Election of Office-bearers.

A MEETING of this society was held on Nov. 11th, Dr. A. BALLANTYNE, President, being in the chair.

The PRESIDENT read an address on Chloroform in Midwifery. He referred to the communications of Sir J. Y. Simpson to the society in 1847 on the first cases in which he had used sulphuric ether during labour; in three weeks he gave the result of his observations which in all essential particulars had since been fully sustained. This occurred a few months after Morton had demonstrated the production of anæsthesia in severe operations. Simpson's first case was one of turning, and no one knew whether ether would abolish uterine contraction as well as pain. His success was so complete that he felt justified in using ether to annul the pain of ordinary labour. Unsatisfied with ether he tried many other anæsthetics till in November, 1847, he introduced chloroform as a more potent, portable, and pleasant anæsthetic. Simpson never seemed to anticipate any untoward effects from chloroform narcosis and gave it freely, relying on his many experiments on himself and his famous co-workers. One was struck with the length and fulness of its exhibition. Generally it was continued till after the expulsion of the placenta, and then so deeply was the patient under its influence that she could have her clothes changed and be lifted into another bed, before she was aware of what had happened. Simpson first substituted chloroform for ether on Nov. 8th, 1847. His success led many others to acknowledge its superiority; but opposition and all kinds of objections were taken to it, moral, theological, physiological, and pathological. France and Germany to a great extent practically rejected it. But careful investigation soon disproved the objections that had been raised; a committee on obstetrics appointed in 1848 by the American Medical Association, found anæsthesia in labour both efficient and safe, adding that in some respects it was better adapted for midwifery than general practice. The commission of the Royal Medical and Chirurgical Society reported in 1864 that there was no well authenticated instance of sudden death during its administration in labour, when it had been given by a qualified medical man. Since that time much has been written in its favour. By far the larger part of the civilised world now used chloroform almost exclusively in labour. The President then criticised in detail the recorded cases of death during the administration of chloroform in labour. In considering these cases it must be borne in mind that there was no proof, though it may be presumed that the chloroform was administered by a competent person. In one case there was admitted gross mal-administration, and danger has arisen from entrusting the inhalation to a nurse or incompetent person. There might be idiosyncrasy with regard to it as with other drugs, and impurities in the chloroform might be the source of danger. The practically complete immunity from danger and death which the parturient woman enjoyed, could be explained by considering—first, the pharmacological action of chloroform; secondly, the physiological condition of the woman in labour; and, finally, the action of chloroform on this modified physiological state. The pharmacological actions of chloroform were: (1) increased, then suspended sensation; (2) suspended reflex action; (3) paralysis of the vaso-motor centre, with what was of the greatest importance, a concomitant fall of the general blood-pressure; (4) paralysis of the respiratory centre and slowing respiration; and (5) paralysis of the cardiac ganglia. The modifications in the physiological conditions of the parturient woman in this connexion were: (1) general increase of vascular tension which occurred even early in pregnancy; (2) increase in the total mass of blood in the system during the second half of gestation; and (3) eccentric hypertrophy of the heart. In active labour the chief phenomena were intermitting muscular action of the uterus, abdominal muscles, and diaphragm, with consequent compression of the bloodvessels in the abdomen; an accelerated pulse-rate; forced expiration and increased costal breathing. These resulted in a permanently high blood-pressure, with an intermitting increase of it during the pains and a higher standard of activity in the inspiratory centre. The action of chloroform on this modified physiological condition, as contrasted with that when given in the ordinary physiological state, was that the blood-pressure was not dangerously reduced from its being set at such a high level, and the respiratory centre was not easily paralysed because of the augmented activity from the stimulation of more forcible respiratory movements. It was well known how shallow the respiration might become and how often it tended to stop in surgical anæsthesia; but in obstetrical anæsthesia this was prevented by the physiological "artificial respiration," if such a phrase could be permitted, which recurred with each pain. During a pain the rapid action of chloroform was quickly recovered from by the forced expiration, and the nerve centres temporarily stimulated by the increased respiration resisted the effect of the depressing agent, while the general high blood-pressure furnished a reserve power of resistance against any untoward effect or excessive amount of the anæsthetic. Moreover, it had been affirmed, and recently corroborated, that in cases of chloroform toxæmia when respiration had ceased the rapid dilatation of the spincter ani stimulated the respiratory centre and re-established respiration. So the forcible dilatation of the vagina and external parts in labour might act as a constantly recurring stimulus to this centre, and so lessen the danger of its paralysis when chloroform was most deeply given and most rapidly inhaled. Chloroform was also life preserving. It prevented shock and lessened exhaustion in obstetric operations and long labours. It prevented dangers which might arise from brittle bloodvessels, and by controlling muscular action and minimising blood-pressure in heart disease had saved many lives. The only possible theoretical contraindications to its use might be in cases of emphysema of the lungs, owing to the possibility of an overdosage before any apparent untoward effect could be seen, and also in cases of great and rapid loss of blood, which rapidly lowered the blood-pressure. This would call for great

caution in its administration or the substitution of ether. In concluding, he submitted: (1) That in obstetric function the simpler the method of administration the better; the method was a secondary matter, but the care and watchfulness of the administration all-important; (2) that the best diluent still was air; that the amount of chloroform poured upon a towel or inhaler was of little moment, provided always that air was at first freely admitted and that the effect of the drug upon the person was closely observed; (3) that attention should be persistently directed to the respiration; (4) that in normal labour chloroform should be given only during a pain, till the head was on the perineum and then to full unconsciousness; and (5) that after the birth of the head, chloroform should usually be stopped. Again, that the practitioner was always justified in giving chloroform in normal labour and should offer it, and that it was his duty to do so in all cases of severe labour and in all cases of operative interference.

Dr. D. BERRY HART read a paper on Transverse Septal Atresia of the lower third of the Genital Tract. He first narrated three cases. One was a typical atresia hymenalis; in the second there was an atresia about an inch long above the hymen; and in the third the external genitals and hymen were developed, but the menstrual blood was retained by a transverse septum an inch from the hymeneal entrance. In order to explain these it was necessary to consider the development of the vagina. The usual view was that the vagina was developed in its entire length from the ducts of Müller and that the hymen was formed at the lower orifice by these ducts. The uro-genital sinus was represented merely by the vestibule in the adult. Dr. Berry Hart then re-stated his views on the development of the hymen—viz., that it was formed by the development in the upper part of the uro-genital sinus, of two epithelial bulbs from the Wolffian duct (Wolffian bulbs), and that by their coalescence and central breaking-down, aided by an involution from below, the hymeneal opening was established. He believed, therefore, that the lower third of the vagina was derived from the uro-genital sinus and the upper two-thirds from the ducts of Müller. Typical atresia hymenalis was due to persistence of a septum between the involution from below and the lower end of the Wolffian bulbs; the rare case where the septum was present an inch from the hymen was due to a persistence of the lower end of the ducts of Müller, while if the Wolffian bulbs did not break down there was an atresia in the lower vaginal third. The other two were septal; this special one was the longest and narrower. The paper was illustrated by limelight projections on the screen of micro-photographs of sections and diagrammatic representations of the development of the parts. — Professor SIMPSON, Dr. HAULTAIN, and Dr. J. W. BALLANTYNE took part in the discussion.

The following office-bearers were elected for the ensuing session:—President: Dr. A. Ballantyne (Dalkeith). Vice-Presidents: Senior, Professor A. R. Simpson; and junior, Dr. R. Milne Murray. Treasurer: Dr. Craig. Secretaries: Dr. F. W. N. Haultain and Dr. J. Haig Ferguson. Librarian: Dr. Milne Murray. Editor of Transactions: Dr. J. W. Ballantyne. Members of Council: Dr. A. H. F. Barbour, Dr. James Ritchie, Dr. Andrew Balfour (Portobello), Dr. J. Jamieson, Dr. J. B. Buist, Dr. W. N. Elder, Dr. Hamilton (Hawick), and Dr. Fraser Wright.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Exhibition of Cases and Specimens.—Epithelioma of the Tonsil and Left Posterior Pillar removed by lateral Pharyngotomy.

THE second meeting of this session was held on Nov. 9th at the Faculty Hall, Glasgow.

Dr. KERR LOVE showed a girl aged seven years who fell from a height of twenty feet and sustained a Fracture of the Base of the Skull. There was bleeding from the right ear for five days, from the nose for two days, and a hæmatoma formed behind the right mastoid. There was right facial palsy lasting for two days and right internal strabismus due to paralysis of the external rectus which remained absolute for about eight weeks, but was now beginning to pass off.

Dr. J. CRAWFORD RENTON showed a patient aged thirty years whose cæcum he had excised for Persistent Fistula following on abscess in that region. The fistula had existed since 1891, and having performed two operations for closure of the fistula without success Dr. Renton removed the cæcum with an ulcerating appendix and joined the ileum to the colon by means of a Murphy's button. The button was passed on the sixteenth day and the patient was now quite well.

Mr. HENRY E. CLARK showed photographs and preparations from a case of Secondary Sarcoma of the Lungs and Diploë of the Skull where the primary lesion involved the left scapula. Amputation of the scapula was performed in July, 1895. The patient, a boy aged thirteen years, remained in excellent health till June, 1896, when sarcomatous masses appeared on each side of the head and the right lung showed signs of extensive deposit. He was re-admitted into hospital on Aug. 19th and died within twelve hours of admission. On post-mortem examination it was found that on the left side of the chest there was a sarcomatous mass involving the fifth, sixth, and seventh ribs; to this the lung was closely adherent. Behind and attached to this lung was a smaller tumour about the size of a hen's egg. About two-thirds of the right lung was involved in a tumour mass; this was firmly adherent to the chest-wall and was sarcomatous in character. The tumours of the skull were found to pass through the whole thickness of the parietal bones and to involve the dura mater. They caused considerable flattening of the cerebral substance in the region of the vertex, but the brain matter was found to be perfectly healthy. There was no secondary involvement of the kidneys, liver, or other organs.

Dr. DAVID NEWMAN read notes on a case of Epithelioma of the Tonsil and Left Posterior Pillar removed by Lateral Pharyngotomy. The patient, a man aged fifty-four years, was sent to the Royal Infirmary on April 20th, 1896, by Dr. James Paton of Greenock, who informed Dr. Newman that he was suffering from malignant disease of the tonsil. The patient had always enjoyed good health until six weeks previously to admission, when he began to suffer from pain in the throat, which had steadily become worse. During rest the pain was not severe, but during deglutition it was sharp and lacerating; the dull, constant pain was referred to the root of the tongue and the faucial region, while the more acute pain extended to the ear. There was some difficulty in swallowing and considerable increase in the saliva, so that the secretion tended to collect in the mouth, and when accumulated it flowed from the angles of the mouth. The voice was very little altered, only so far as the sounds were impeded by the pain produced by movements of the muscles of the mouth and pharynx. Examination of the pharynx revealed a tumour the size of a pigeon's egg occupying the left tonsil. The surface was very irregular, ulcerated, moderately hard, and showed a few small bleeding points. The growth was almost limited to the tonsil, but on very careful examination it was found to involve the anterior part of the posterior pillar, and it extended down to, but did not involve, the base of the tongue. The anterior pillar was free and there was no enlargement of the lymphatic glands; the larynx was normal. The thoracic and abdominal organs were normal. On the 30th a small portion of the tumour was removed for microscopic inspection, and when, on examination made immediately, it was found to be an epithelioma the tumour was excised at once by performing lateral pharyngotomy in which the lower jaw was divided at its angle on the left side. The patient made a good recovery, and up till now, seven months after the operation, there has been no recurrence.

THE PROPOSED NEW HOSPITAL FOR PORTSMOUTH.—At a recent special meeting of the committee of the Royal Portsmouth, Portsea, and Gosport Hospital most of the medical practitioners of the borough were present. A resolution was carried by a large majority to the effect that the best mode of commemorating the sixtieth anniversary of the Queen's reign would be the enlarging and improving the hospital on its present site. It transpired that no new and convenient site could be found, and it was urged that a modern hospital on a new site would be too costly and take too long to complete. A sub-committee was appointed to prepare plans and the services of a specialist in hospital architecture are to be secured. When plans are ready the Mayor is to be asked to call a town's meeting with a view to the raising of funds.

Reviews and Notices of Books.

A Text-book of Bacteriology, including the Etiology and Prevention of Infective Diseases and a Short Account of Yeasts and Moulds, Hæmatozoa, and Psorosperms. By EDGAR M. CROOKSHANK, M.B. Lond., Professor of Comparative Pathology and Bacteriology, and Fellow of King's College, London. Fourth Edition. Re-constructed, revised, and greatly enlarged. London: H. K. Lewis. 1896.

IN the large volume of over 700 well-filled pages, with its 273 figures, 22 coloured plates, and altered arrangement, we have a fourth edition of Professor Crookshank's book which bears little resemblance, either in substance or in form, to the first edition which appeared only about ten years ago. The author in his preface says that "this book, though nominally a fourth edition, is, practically speaking, a new work." In arranging his subject Professor Crookshank has divided it into three parts. The first, dealing specially with the technique that has to be acquired by every student of bacteriology, in which are given special methods of staining, cultivation, and descriptions of the apparatus necessary for the conduct of bacteriological research, opens with a series of chapters dealing with some of the general questions in bacteriology the history, morphology, and physiology of bacteria, the effects of antiseptics and disinfectants, the chemical products of bacteria, a short description of the various theories of immunity, followed by an account of the antitoxins and serum therapy. The second part of the work is devoted to an account of the etiology and prevention of infectious diseases, and here are treated in turn, with more or less fulness, the principal pathogenic bacteria met with in man and in the lower animals. All the accounts are fairly full, but, perhaps naturally, a good deal more space is devoted to those questions to which Professor Crookshank has given special personal attention, so that horse-pox, cow-pox, and actinomycosis assume an importance in the book which, though justified by the work the author has done on them, goes somewhat beyond the limits of any text-book description. This is perhaps an advantage in certain respects, as it enables the student to form an idea of the amount of work that has to be done before original investigations can be presented to the scientific world. The third part of the book is devoted to the classification and description of micro-organisms, of which nearly 500 are mentioned, the description of the more important of these in most cases being fairly full, some, too, being illustrated by woodcuts. In a series of appendices are given descriptions of the various yeasts and moulds; of the animal micro-parasites—hæmatozoa of malaria, of surra—trichomonas (Trypanosoma) Evansii, and similar organisms found in rats, turtles, and birds, fish and frogs; and psorosperms or coccidia, including cancer bodies. These chapters should prove of assistance to those who wish to follow the subject of surra and tsetse disease or Nagana, which just now are occupying so much attention. In other appendices are given the apparatus, material, and reagents required in any ordinary well-fitted-up laboratory. The bibliography is well brought up to date, especially in French and German literature, and there is a supplementary appendix containing extracts from the final report of the Royal Commission on Vaccination.

Professor Crookshank has introduced a new feature into a work of bacteriology in that he has, with Professor Hamilton's permission, made use of a considerable number of drawings of morbid histological conditions met with in some of the specific infective diseases. He has also used numerous illustrations from the best sources, whilst the illustrations made specially for the work are in most instances admirable, though we think that those that illustrate foot-rot are scarcely worthy of the rest of the book.

To the student who wishes to obtain a good *résumé* of what has been done in bacteriology or who wishes an accurate account of the various methods of research, the book may be recommended with confidence that he will find there what he requires, whilst to the medical officer of health and the veterinary surgeon it will prove useful, not only from the fact that it contains so much of description and technique collected from various sources, but also because in his reading and investigation Professor Crookshank has collected a large amount of information on the public health aspect of bacteriology and on the relation of bacteriological investigation to the practice of veterinary medicine and surgery and veterinary public health.

In the printing the full value of good type and good illustrations has been obtained, and we congratulate Professor Crookshank most heartily on the enormous advance that this edition has made on all the previous editions of his well-known work.

A System of Gynæcology. By Many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D.Camb., LL.D., F.R.C.P.Lond., F.R.S., F.L.S., F.S.A., Regius Professor of Physic in the University of Cambridge, Fellow of Gonville and Caius College, and W. S. PLAYFAIR, M.D.Edin., LL.D., F.R.C.P.Lond, Professor of Obstetric Medicine in King's College and Obstetric Physician to King's College Hospital. London: Macmillan and Co., Limited. New York: The Macmillan Company. 1896. Price 25*s.* nett.

WE think the editors have been well advised to arrange in a separate form, in the present instance in one volume, the information on gynæcology which they intended to include in their "System of Medicine." As Dr. Playfair says, this department of medicine has grown largely within the last few years, and we are inclined to doubt whether a work of the scope indicated by the title, "A System," should not have required one more volume, or perhaps, indeed, several more volumes, in order that the whole subject might have been adequately treated. There are several small books on gynæcology, besides many of a size similar to the one before us, and it seems a matter of regret that the opportunity afforded by sub-dividing the labour among twenty-six contributors should not have resulted in the production of an exhaustive dictionary on gynæcology thoroughly representative of the position of that department of practice in the United Kingdom at the present time.

Dr. Playfair says in the preface that "it is obvious that a collection of independent essays written by men on topics which they have specially studied must carry more weight and be more useful than any work compiled by a single writer." No doubt there is a great deal of truth in this. Many of the articles, however, are necessarily on subjects that must be regarded as equally familiar to all competent gynæcologists; such, for instance, are the articles on Diagnosis in Gynæcology, the Disorders of Menstruation, Diseases of the External Genital Organs, and some others, which, excellent as they are, would probably have been equally good if written by any of the contributors other than the actual author in each case. On the other hand the principle referred to in the above quotation from the preface has force as regards the article on the Anatomy of the Female Pelvic Organs by Dr. Berry Hart, in that on Extra-uterine Gestation by Mr. Bland Sutton, in that on "Pelvic Inflammation" by Dr. Cullingworth, and in some other cases. The article on the Etiology of the Diseases of the Female Genital Organs, by Dr. Balls-Headley, strikes us as one of the least satisfactory in the book; much of it is so much a matter of assumption that, however creditable to the writer's imagination, the result can not be otherwise than unsatisfactory in a scientific treatise.

where conclusions should be based on facts. Take, for instance, the following passage (p. 118), speaking of the "congenital apparently granular os," by which the author presumably means a slight erosion. He says:—

"The effect of this exposure of the glandular structures at the external opening of the cervix to the influences of the acid vaginal secretions, and to friction against the vagina on movement, intensified by fixation due to abnormal abdominal pressure, is the production of an excessive supply of blood, which causes congestion and inflammation of the glands and increased secretion of their strongly cohesive mucus which plugs the canal; the uterine vessels thus becoming enlarged a varicose state may be induced, and the whole uterus become congested, so that general endometritis ensues. Also, the connective tissue at the face of the cervix becomes hyperplastic, the lips are compressed, and thereby the secretions, which are usually plentiful, find difficulty in escape; the uterus becomes irritated by distension so that endometritis is increased and evolutionary disease of the tubes, peritoneum, and ovaries, and (under the concurrent influence of excessive abdominal pressure) anteflexion or retroversion ensue: hence result virginal menorrhagia and dysmenorrhœa and sterility on marriage."

Dr. Balls-Headley evidently holds strong views on the subject of stays. Without for a moment denying the danger of tight-lacing (it does not necessarily follow that every woman who wears stays laces them too tightly), there can be little doubt that the whole thing becomes a little ridiculous when almost everything, from ulcer of the stomach and jaundice to peritonitis, is gravely ascribed to the habit of wearing stays. The following extract will serve to illustrate the author's method:—

"The Fallopian tubes are liable to be bent at their junction with the uterus by the misplacement of the uterus in combination with pressure downwards of the intestines by the stays and dress. Thus in the sexual engorgement in love-making, with or without union, in women of warm appetite, this abnormal relation of the tubes to the uterus may induce effusion of their secretions into the peritoneum, particularly during menstruation, and a local peritonitis; otherwise, they would pass in the normal direction through the genital canal."

In the preface Dr. Playfair disclaims all responsibility other than that involved in having selected the contributors; but in doing so we think he has taken an unusual view of the duties of an editor. The editor of a journal who invited contributions, and published everything sent him by his staff, without selection or emendation would probably soon cease to have a journal to edit. In the present instance we think the work would have been improved had the editor taken a somewhat broader view of his functions. The paper by Dr. Sinclair on Malignant Diseases of the Uterus, good as it is in many ways, will no doubt be read with interest; but it appears to us regrettable that in discussing the operative treatment of cancer of the cervix, and the vexed question as to whether cases suitable for operation should be generally treated by total extirpation of the uterus or by the supra-vaginal amputation of the cervix, he has contented himself with quoting Continental statistics and his own statistics only, and has omitted to notice much of the work done by operators in his own country. In an essay such as this in a System of Gynæcology we might have surely expected to find a fair summary of both sides of the case, and if statistics are quoted on one side they should have been quoted on the other. This is the more desirable, inasmuch as series of operations for cancer of the uterus by English operators have been published from time to time—for instance, in our own columns—which, both from the point of view of mortality and non-recurrence, compare very favourably with the series here furnished by Dr. Sinclair from his own practice. In the paper read by Mr. Knowsley Thornton on this subject at the meeting of the British Medical Association in 1895, both sides of the case were fairly stated, and we think in the present instance Dr. Sinclair would have done well to have followed Mr. Knowsley Thornton's good example in this respect.

In London we have not been hearing much lately of the electrical treatment of the diseases of women, on which we find here a paper by Dr. Milne Murray. As regards the action of electricity on fibroid tumours of the uterus we read that "Apostoli's method is now generally regarded by those who have given it a fair and intelligent trial as fulfilling a certain well-defined but highly important function in gynæcological therapeutics"; on the other hand, we know at all events that several men who have tried it fairly and patiently have abandoned it altogether, as having little or no practical value, and as not being free from danger. Among the articles not already referred to we observe, in that on Gynæcological Therapeutics, by Dr. Amand Routh, a useful chart of baths and health resorts, with an indication of the proper season in each case; while in the article on Hysterectomy, Mr. Knowsley Thornton's avowed preference for the extra-peritoneal method has not prevented him from giving a lucid and complete summary of the various alternative procedures.

The book as a whole, like most specimens of composite work, must be regarded as being a little unequal; while there is little that is new in it, most of the articles are readable (with the distinct exception of that by Dr. Balls-Headley), and the information under each heading appears to be generally sound. In these days when it is becoming customary for expensive books to be beautifully illustrated, we cannot help thinking that the work before us falls a little short of what might have been expected in this respect, if we compare it, for instance, with the somewhat similar American Textbook of Gynæcology edited by Dr. Baldy.

JOURNALS AND REVIEWS.

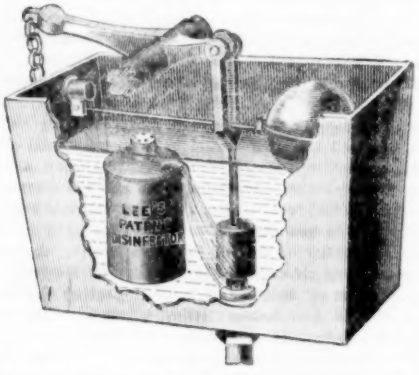
IN the *Veterinarian* for November the most important paper is that by Professor Cossar Ewart on his "Telegony Experiments." In his stud at Penicuik, Midlothian, on which he has had three Burchell's zebras (a horse and two mares), an Arab horse, a thoroughbred filly, a mare, a number of Irish, Iceland, Shetland, and Norway ponies, an Arab mare, an Island of Rum pony, and a New Forest donkey, on Aug. 12th there was born a zebra hybrid, a cross between the zebra horse and the West Highland pony, the first foal that this mare had had, and Professor Ewart intends to see whether the next foal by a different sire will be marked by any of the zebra stripes. A full and most interesting description of this hybrid is given, and also a number of interesting facts regarding the habits of the zebras and horses living together. Mr. Finlay Dun, in his Introductory Address, delivered at the opening of the Royal (Dick's) Veterinary College, referred to the enormous advances made by the veterinary profession during the past thirty or forty years, and one part of his address may be read by those responsible for the medical curriculum with considerable interest at the present juncture. "In no department," he says, "has veterinary education made so much progress or been rendered so practically useful as in pathology. Not many years ago instruction on this subject was mostly given in the class-room, illustrated by preserved and fresh morbid specimens, while a few microscopic sections were shown. But, besides this, an important department of the work is now undertaken in the laboratory, where the student personally prepares and puts up sections of morbid specimens, which he retains, not only for study and reference while at college, but for use afterwards. He thus becomes familiar with the naked-eye as well as the microscopic appearances of all important morbid conditions. Conscientiously devoting himself to such systematic pathological work for six or nine months the student, proceeding to his practice of medicine and surgery, finds them based to a large extent on definite principles and made greatly more simple and plain. Instead of having to learn and recollect innumerable isolated facts regarding countless diseases and injuries he is familiar with the morbid processes common to most organs, and knows the conditions they are liable to assume in various structures." These are wise words and show that those responsible for veterinary teaching are alive to the importance of instruction and education

as compared with mere routine cram work. Some Points in the Evolution of the Horse, by Roland G. Saunders, M.R.C.V.S., are interesting, the present paper being devoted to the development of the teeth. Clinical Notes, Notes on the Opening Addresses of the other Colleges, Abstracts of Foreign Papers, Reviews, Notes on Current Topics, and Reports of the various Veterinary Societies complete the number.

New Inventions.

PATENT AUTOMATIC DISINFECTOR.

THE action of this ingenious little appliance is so manifest from the accompanying illustration as hardly to need further description. It is quite automatic, and consists of a metal container charged with permanganate of potash crystals. On being submerged in the water of the cistern and placed in the position shown in the illustration water enters at the top and soon becomes saturated with permanganate, and when the water of the cistern is withdrawn the pressure upon the contents of the disinfector is reduced, and so the saturated solution of disinfectant is discharged. In other words, the working of the apparatus depends upon the action of the syphon. When the cistern is



refilled water once more enters the container at the top and dissolves a further quantity of the permanganate, which in its turn is discharged again on the cistern being emptied. In this way it is stated that the ordinary size disinfector will afford 1500 charges. It is a neat and handy contrivance which may obviously be used with advantage in the cisterns of waterclosets not so much to disinfect crude excreta as to keep the pan sweet and clean, while also any gases that may escape through the trap would be to some extent deodorised. The disinfector is the property of the Lee's Automatic Disinfector Company, 93, Northumberland-street, Liverpool.

THE SUN POCKET STOVE.

THIS consists of a small, elliptically-shaped metal canister, perforated on the sides and provided with a space in the centre bounded by wire gauze, which admits of the introduction of a carbon rod. After the rod has been placed in position a light is applied at the top and the screw cap screwed down. Combustion then steadily proceeds, and the rod glows so that the canister keeps warm for some time—in fact, until the rod is completely burnt. Almost a pure white ash remains. The combustion of the carbon is facilitated by being impregnated with nitre. The metal case gets somewhat hot, we find, for direct contact with the hands, but this too could easily be provided against by covering it with felt or some similar material. It may obviously serve for a variety of useful applications. As far as our experiments went the apparatus appeared to be quite safe and the combustion of the carbon complete. It is the property of Messrs. Blair and Co., 4, Croydon-street, W.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XLVI.

The Analytical Sanitary Commission.—The Editorial Definition of its Scope.—The Inquiry into the Adulteration of Coffee.

IN 1851 Wakley commenced in the columns of THE LANCET the most useful agitation in favour of legislative reform that ever engaged his attention, alert as he had shown himself during twenty-five years of public life to learn where the popular wrong lay and to propose a practical and effective remedy for it. It was in this year that he decided to issue the results of microscopical and chemical analyses of the food-stuffs, solid and fluid, in general consumption by the nation. The idea was not a new one—in fact, it had been present in his mind ever since his first election to Parliament—but the gigantic labour of such an inquiry, undertaken with proper thoroughness and security from error, had hitherto prevented him from embarking upon it: he knew the grave responsibilities that it would involve. "We have undertaken," he said at the commencement of the inquiry, "a task large enough to engage the attention of the Government of this country. With the exception of officers to observe and report upon diseased meat or fish, the public authorities take no cognisance of the adulteration and poisoning by the slower but equally sure mode of adulteration of food and drinks. We will bring the microscope and the test-tube to bear with unerring truth upon things hidden and secret enough to the unaided senses ..... for the protection of the public, the advantage of the fair trader, and the ultimate exposure and punishment of the fraudulent one."

This sentence formed a general introduction to the new inquiry. The special introduction to the series of articles which were issued under the generic title of "THE LANCET Analytical Sanitary Commission," defined the scope of the proposed inquiry, which was to form nothing less than an attack upon prevalent methods of adulteration and sophistication of food so thorough and uncompromising that it would on the one hand frighten individual evil-doers into better behaviour and on the other open the eyes of Parliament to the absolute necessity for State interference.

"INTRODUCTION TO

THE ANALYTICAL SANITARY COMMISSION.[2]

RECORDS OF THE RESULTS OF MICROSCOPICAL AND CHEMICAL ANALYSES OF THE SOLIDS AND FLUIDS CONSUMED BY ALL CLASSES OF THE PUBLIC.

"Forewarned, Forearmed."

Uncontaminated air and pure water are now universally regarded as necessary to the maintenance of healthy existence, and to obtain them we have appointed "Boards of Health" and "Commissions of Sewers." That unadulterated Food, the bone and muscle of the body, is not less requisite, will be readily allowed, and it will appear on reflection as somewhat remarkable that the interests of the public in

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., XXI., XXII., XXIII., XXIV., XXV., XXVI., XXVII., XXVIII., XXIX., XXX., XXXI., XXXII., XXXIII., XXXIV., XXXV., XXXVI., XXXVII., XXXVIII., XXXIX., XL., XLI., XLII., XLIII., XLIV. and XLV. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, 23rd, and 30th, June 6th, 13th, 20th, and 27th, July 4th, 11th, 18th, and 25th, Aug. 1st, 8th, 15th, 22nd, and 29th, Sept. 12th, 19th, and 26th, Oct. 3rd, 10th, 17th, 24th, and 31st, and Nov. 7th, 14th, and 21st respectively.

[2] THE LANCET, 1851, pp. 20-21.

these important particulars should not hitherto have been watched over and protected by any authorised body or commission.

That the various articles of consumption differ greatly in quality and are subject to numerous adulterations must be evident to all from the slightest consideration and examination of the subject; and if any general proof were required to establish the truth of this position it would be found in the low and unremunerative prices at which many commodities to be genuine are now commonly sold. That, therefore, there is much relating to our food and drink requiring exposure and remedy cannot be doubted.

We propose, then, for the public benefit to institute an extensive and somewhat vigorous series of investigations into the present condition of the various articles of diet supplied to the inhabitants of this great metropolis and its vicinity, and probably the inquiries will be extended to some of our distant cities and towns.

One especial feature of these inquiries will be that they are all based upon actual observation and experiment; the microscope and test-tube throughout these investigations will be our constant companions. We shall borrow but little from the writings of others, preferring to labour and think for ourselves and to work out our own conclusions in an independent manner.

A second feature will consist in the introduction of faithful engravings illustrating all the more important points and particulars of each article.

A third and highly important feature will be the *publication* of the *names* and *addresses* of the parties from whom the different articles, the analyses of which will be detailed, were purchased; the advantages of such a course of proceeding require no explanation.

Experience has shown that any merely general exposure of the nature of the adulterations practised on the public through their food is not sufficient to deter from a repetition of them, and that the only way in which it can be hoped that such fraudulent practices can be stayed and the public protected is by such proceedings as will entail personal discredit and probable loss.

Now although we are fully and firmly determined to protect the interests of the public, we at the same time do not desire to inflict injury on any one, as a proof of which we shall refrain from giving the names of adulterators for the space of three months from this date, and shall at present, in connexion with the analyses, merely indicate the street or place in which each vitiated commodity subjected to examination was purchased.

Notwithstanding that we should be perfectly justified in at once making known the name of the tradesman and merchant who is dishonest enough to adulterate the article which he vends, and although to such a proceeding he could raise no sufficient objection, nor hope for the sympathy of the public, yet desiring to avoid all appearance of harshness, we shall refrain, as we have stated, from doing so at present, but give him the benefit of this distinct warning.

That the public at large will be greatly benefited by these inquiries is obvious, and that many of our colonists (at least such as import any article of food into [*sic*] this country), the revenue itself will be largely the gainers, might be very easily and satisfactorily proved.

The honest tradesman or merchant will also be benefited; he has nothing to fear but, on the contrary, much to gain, for while he will be able to secure fair prices for a genuine commodity, his name also will be made known to the public, and he will be upheld in his true light and character as an upright and honourable tradesman.

Who, then, will fear the disclosures it will be our duty to make. Fraudulent dealers—whether they be wholesale merchants, knavish manufacturers, dishonest brewers, or adulterating retailers—they alone will have cause to fear, but none whatever rightfully and legally to complain of the consequences of their own unprincipled proceedings.

The urchin who filches a bun, a penny-piece, or the value of one, breaks the law and is liable to punishment, and even imprisonment—is it to be supposed, therefore, that the cunning and systematic adulterator of our food and drink, who robs us not only of our money, but sometimes even of our health and strength, is less guilty? that he is to be allowed to violate the law with impunity in his daily dealings and not only to go unpunished, but to carry about with him, as at present he commonly does, in his intercourse with his fellows, the undeserved reputation of an honest man? That the law, while it rigorously punishes the trivial offender, should allow the greater criminal to go at large unscathed is an insult to common sense.

But the question is not merely one of honesty and dishonesty, of profit and loss, it is also sanitary, one of health, and even in some cases of life itself, of which many proofs might be readily adduced.

Thus the physician, having carefully planned the diet of his patient, too often finds his well-grounded hopes frustrated through the nefarious practice of adulteration.

In one case he orders arrowroot and isinglass—the first is very commonly adulterated with potato or some other farina, whilst for the second is substituted some ill-prepared form of gelatine.

In another case he prescribes strong coffee or tea, it may be to counteract the effect of some narcotic poison. The one is adulterated with a large quantity of chicory, and the other consists of exhausted tea-leaves re-dried.

Examples like these, affecting strength, health, and sometimes life might be multiplied to almost any extent; but these few observations are sufficient to show the vast interests involved in the consideration of the subject of the adulteration of the food and drink consumed by the public.

In treating the several subjects which will come under our notice we do not intend to confine ourselves to any very strict order of arrangement, but shall probably from time to time turn aside from our regular course to take into consideration such subjects as may happen to be possessed of peculiar or temporary public or professional interest."

In accordance with this introduction the following articles of food were then made the subject of microscopical and chemical examination: coffee, sugar, arrowroot, London water, chicory, mustard, bread, cocoa, farinaceous foods, oatmeal, tea, milk, isinglass, vinegar, spices, curry, bottled fruits and vegetables, anchovies and potted meats, sauces, jellies, and jams, lard and butter. Two substances not foodstuffs, but counting for much in the comfort of humanity—tobacco and opium—must be added to this list.

The method of treating the first article—coffee—was the plan followed in all the subsequent inquiries and will be detailed for that reason. It formed a good example of thoroughness; it left no loophole for offenders and allowed no possible cavil on the grounds of any doubtful honesty of purpose. There was, in fact, no shrinking on the part either of the Editor or of the expert Commissioner, who was, as is now well known, the late Dr. Arthur Hill Hassall. The scheme upon which the examinations were made was due to the joint invention of Wakley, Sir William Brooke O'Shaughnessy, and Dr. Hassall. The article appeared on Jan. 4th, 1851, and commenced by boldly stating it to be a fact that coffee was largely adulterated. To obviate all possibilities of contradiction it was pointed out that whereas between certain dates the population of Great Britain had increased and the greater use of the commodity was vaunted by dealers and by the promoters of the temperance cause, the amount imported under the name of coffee had decreased. In 1849 the amount derived by the Exchequer from the coffee duties was said to be £709,632 3*s.* 11*d.*, and in 1850 it amounted to only £642,519 10*s.* 9*d.* One of two things had happened; either an increased demand for coffee was being fraudulently met, or the people having discovered the beverages as supplied to them by sophisticating dealers to be nasty and non-nutritious were deserting it. Another significant fact was that chicory was being cultivated in large quantities in this country, and yet little or none of it was retailed to the public under this name.

Next careful descriptions with illustrations were given of the microscopic appearances of a section of the unroasted coffee-berry, of the roasted berry, and of the investing membrane of the berry. These appearances were contrasted with illustrations of roasted chicory root, while the minute structures of the farinæ of various grains and fruits were given at length, the point of difference between corn-flour, potato-flour, and bean-flour on the one hand and ground coffee on the other being elaborately distinguished. The

ground being thus cleared the commissioner went promptly to the root of his work. He gave the results of the microscopic examination of thirty-four different coffees of all qualities and prices which were being sold under such attractive titles as, to mention a few, "Fine Old Turkey Coffee," "Fine Jamaica Coffee,' "Finest Berbice Coffee," "Finest Java Coffee," "Delicious Family Coffee," and "Delicious Drinking Coffee." The result of this examination was little short of sensational. It justified every word that Wakley had predicted when he promised to publish investigations into the food of the people in his columns and virtually made an alteration in the law necessary. The thirty-four coffees were with three exceptions adulterated, and the three exceptions all occurred in samples of coffee retailed at a high price—the beverages of the people being uniformly impure. Chicory was present in thirty-one instances, roasted corn in twelve, beans and potato-flour in one case each. In sixteen cases the adulteration consisted of the substitution of chicory for coffee only, in the other fifteen the coffee had undergone additional treatment with bean-flour, potato-flour, or roasted corn. In many instances the quantity of coffee present was very small, actually more than four-fifths of the bulk of some of the samples being formed by alien substances. The gross aggregate of the adulterations detected amounted to more than one-third of the entire bulk of the quantities purchased, from which this startling calculation was drawn, that the revenue had been defrauded during the year 1849—i.e., the figures for that year were used as a basis of calculation—of no less a sum than £300,000.

The results of a second or confirmatory examination were then appended. Here twenty samples of various coffees had been purchased at the establishments of different metropolitan grocers and tea and coffee merchants, and in every single case the coffee was found to be adulterated, in sixteen the tampering being of the grossest character. To defend the honest trader from his fraudulent competitors the names and addresses of the two dealers from whom the three pure samples discovered in the examination of the fifty-four samples tested in the two examinations were printed at full, and the names of the adulterators were promised at a later date, unless examination of their wares showed them to have profited by the warning.

The results of the first analytical sanitary commission published by THE LANCET created the *furore* that its editor expected. The daily press reprinted large portions of the article and was outspoken in praise of the enterprise of those who had undertaken it and the admirable work that was foreshadowed by it, declaring it to be the duty of the Legislature immediately to adopt effective measures to secure the public against such frauds. Accordingly, the Chancellor of the Exchequer (Sir Charles Wood), in the Budget which he presented to the House in the early spring of 1851, made a statement upon the subject, but it did not tend to allay the widespread feeling of distrust and indignation of the public, and produced much dissatisfaction among the owners of coffee estates and respectable wholesale dealers. Sir Charles Wood justified the mixing of chicory with coffee—a proceeding which, it should be clearly understood, had been legalised by a Treasury minute, on the ground that the former was a cheap and nutritious root, the addition of which to the expensive berry resulted in a fragrant blend, which could be sold at a price within the reach of the purse of the poor. To this Wakley replied that, firstly, chicory should not be sold as coffee; if the poor desired to buy chicory they should at least know that when they asked for coffee a mixture containing chicory is what they would—in varying proportions, but seldom or never under 25 per cent.—obtain. Secondly, he pointed to the gross injustice that was being done to colonial importers. These were at that date protected to a certain extent, the duty on colonial coffee being 4*d.* a pound and that on French coffee 6*d.*; but they derived no benefit from the protection, for they could not compete against home-made messes compounded of potato-flour, and colouring matters; while a proposal to do away with this measure of protection was among the suggestions of the Chancellor of the Exchequer. Thirdly, it pleaded the cause of the honest traders. If adulteration by chicory was made illegal—i.e., if the offending Treasury minute was expunged—he believed that the poor would be properly catered for and a pure beverage provided for them at moderate prices, and that the straightforward dealer who scorned to sell sophisticated goods under lying titles would have an equal chance with his less scrupulous rivals.

On March 15th, 1851, Dr. Hassall immensely strengthened the position taken up by THE LANCET with regard to coffee by making an analytical examination of chicory which disposed of the pretension possessed by the now notorious shrub to valuable diabetic qualities. Dr. Hassall found it neither wholesome nor nutritious, and also found that it was not a particularly easy substance to obtain pure or cheap. Of thirty-four samples of chicory purchased at the establishments of different metropolitan grocers, or supplied as samples from wholesale dealers, fifteen were found to be adulterated, the substituted matters being roasted corn or acorns, while the price of undoubtedly pure chicory was so comparatively high as to make it unlikely that this form of adulteration alone would be employed by unscrupulous traders.

On April 26th, 1851, a second report was made by Dr. Hassall upon coffee and its adulteration, and on this occasion the expressed determination of publishing names of adulterators was carried out, for the full addresses of all the persons from whom the samples had been purchased were published alongside of the results of the analysis. "We are fully aware," ran the opening sentences of this report, "that in following this course we incur immense responsibility. ..... We know that we expose ourselves to abuse, threats, legal proceedings, and to misconstruction and misrepresentation of our motives and intentions; but strong in our cause we will not allow these considerations to deter us from fearlessly pursuing the course we deem necessary to effect our objects." Forty-two samples of coffee were purchased at different metropolitan establishments for the purposes of the second examination. In spite of the publicity that had been given to the ways of the adulterator, thirty-one samples were even now found to be adulterated with chicory. In two cases only was any other adulteration than that with chicory observed; in one the added substance was presumed to be horse-chestnuts, while in the other it appeared to be some amorphous colouring matter, in all probability a constituent of bad chicory and not owing its presence to any special malignity of the shopman towards his customers. Some of these adulterated samples were purchased under assurance that the coffee in question contained no chicory, while many of them were described by their retailers as coffee as unprecedented strength and fragrance. The chief deduction to be drawn from this second inquiry was that the diminished ratio of adulteration to honest tradesmen showed that some retailers, in consequence of the exposures made, or threatened to be made, had abandoned the use of chicory entirely. Others who had adopted a middle course and who were selling the genuine coffee and the legally adulterated coffee as separate articles were commended for their frankness save where no care had been taken in the purchase of the chicory; but as it was now an open secret that chicory was itself an article subject to adulteration of crude and pernicious sort the commissioner did not hold a trader quit of corrupt practices if he added what he had bought elsewhere as chicory without taking proper precautions against the substitution of acorns or horse-chestnuts. If the retail grocer was satisfied

to buy any powder that was offered to him as chicory he would certainly purchase pulverised rubbish specially prepared to meet the willingness of the English poor to purchase a coffee that was not genuine.

A third inquiry was held later in the same year into the sophistication of the coffee of commerce, and on this occasion the subject of Dr. Hassall's investigation was canister coffee. This coffee, it had been asserted by THE LANCET at the commencement of the inquiry, was more generally adulterated than loose coffee, and the result proved the accuracy of the statement. Of twenty-nine packages, canisters, and bottles of coffee submitted to analysis, twenty-eight were adulterated, the adulteration in every case consisting of chicory, to which in five instances other substances such as roasted wheat farina and powder resembling crushed mangel-wurzel and pounded acorns had been added.

(To be continued.)

SANITARY MEASURES IN INDIA.

THE Report on Sanitary Measures in India in 1894-95 recently issued is one of a series that has for many years past been prepared for presentation to Parliament. It contains chapters on the health of the European and native troops, general population, and the prisoners in gaols, together with chapters on vaccination, medical institutions, medical schools and lunatic asylums, and on sanitary works executed during the year. Appended to the report are some ably compiled abstracts of the official reports furnished by the three principal sanitary commissioners in India, together with memoranda by the Army Sanitary Commission in this country reviewing the several sanitary reports for India. Much of the information has been already furnished to our readers in our review of the last report of the Sanitary Commissioner with the Government of India. The range and scope of these reports, like the country to which they refer, are altogether too vast to be dealt with even in a series of articles, much less in one; but we may nevertheless usefully recapitulate a few points and refer to some others that strike us as of interest at the present time. The year 1894 was an unhealthy one both for Europeans and natives. The health of the European army serving in India was, on the whole, less satisfactory than in the previous year; the death-rate rose from 12·61 to 16·07, and the total loss by death and invaliding was 42 per 1000, being an increase of 4 per 1000 on the previous year. The British force in Bengal was, as usual, the least healthy of the European armies of the three presidencies. The Army Sanitary Commission, in their memorandum on the sanitary commissioners' report, briefly summarise the main points somewhat as follows: Europeans and natives suffered severely in 1894 from diseases of malarial type, a result due, in part at least, to the season having been a wet one. In the European army venereal disease and ague were the chief causes of admission into hospital and inefficiency, whilst enteric fever was by far more fatal than any other disease. The contrast between the European and native armies in point of prevalence of venereal disease and in point of mortality from enteric fever is sharp; the native army enjoyed comparative immunity from both. On the other hand, pneumonia and respiratory diseases generally were greatly more fatal in the native than in the European army, probably attributable in some degree, it is suggested, to the overcrowding and defective ventilation of the quarters occupied by the native troops at many stations—and it may be added to their insufficient supply of warm clothing and of fats and fat-making food, and the much greater liability of the native as compared with European races to contract these diseases on field service, especially when combined with a previous medical history of malarious disease.

It will be remembered that when H.R.H. the Prince of Wales opened the Congress of Hygiene and Demography in this country some years ago he very pertinently, in referring to the group of preventable diseases, asked, Why were they not prevented then? We have done a great deal of late years in elucidating the causes of disease and in tracing the connexion between many of them and the presence of micro-organisms of various kinds, but it has still to be confessed that we have made slow progress in preventing most of the diseases that prevail in the East. Malarial disease is still the curse of many tropical and sub-tropical climates, and epidemics of cholera recur from time to time with all, if not more than all, their old fatality among those attacked. We have still to complete our knowledge of the extra-corporeal life of these micro-organisms and trace out the methods and vehicles by which they gain an entrance into the bodies of their victims.

But with regard to one class of contagious disease we cannot pretend to be ignorant of the cause of its spread. The amount of venereal disease in the European army of India is appalling and out of all proportion to that which exists in the German, Austrian, French, and Italian armies. In the latter, in which it was highest, the ratio of admission per 1000 for 1890-91 was 104·0, whereas it was 503·5 in the army of India in 1890 and 511·4 in 1894. The returns for India show that the admissions twenty years ago were only a little over one-third of the number admitted in 1894. The Army Sanitary Commission say that from 1876 onwards the annual increase in the number of admissions is seen to have been sometimes slight, sometimes considerable, until 1889, when there was a sudden increase, since which time the figures have never fallen below 400, and in 1894 they have exceeded all previous record. Of course, the introduction of the short-service system, the smaller proportion of men allowed to marry, and, we should say, the great increase of the native female population in India with the consequent overcrowding of the bazaar population, and the poverty of the native races leading to increased prostitution, have all been factors in producing the present state of things. The gravity of the situation is such that no efforts should be spared to find an efficient remedy, difficult as this may be in such a country as India.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of the above society was held on Wednesday, Nov. 18th, Dr. W. B. Ransom being in the chair. A letter was read by the President from the secretary of the Nottingham University College asking for an expression of opinion from the society as regards the question of establishing a medical school in Nottingham. A discussion followed, in which the President, Dr. Mutch, Dr. Cattle, Dr. Watson, and Dr. Hunter took part, and it was thought that there was no demand for a medical schools in this district, that the experience of other provincial schools was not encouraging, and that the establishing of any but a first-class school was in the public interest undesirable. A resolution was proposed by Dr. Hunter, and carried unanimously, "That this meeting of the Nottingham Medico-Chirurgical Society, having carefully considered the letter from the University College, is unanimously of opinion that it is undesirable to establish a medical school in Nottingham." The meeting also empowered the President and secretaries to reply to the letter and embody in it the spirit of the discussion.—Mr. Chicken read a paper on Some Operations in the Hepatic Region. He considered that accurate statistics of the surgery of the liver were not obtainable, as successful cases were described and unsuccessful ones suppressed. The first two cases he described were ones of hepatic abscesses. The first recovered; the second died, being a case of multiple pyæmic abscesses, not only of the liver, but also of the sub-peritorial region. He described a form of apparatus that he had used successfully in the drainage of hepatic abscess, whereby a constant stream of fluid was passed through the abscess cavity, which was then kept free from all pus. He also described cases of Cholelithiasis: in one a tumour was felt, but on exploration the gall-bladder was found to be absent. In another case an enlarged gall-bladder existed, but no stone was found. A biliary fistula remained after operation; subsequently cholecystenterostomy was performed with the object of closing this. A Murphy's button was used, but the patient succumbed six days afterwards, the flow having been from the duodenum to the gall-bladder, which was in great measure digested. He further described cases where severe attacks of hepatic colic had occurred, but in which no gall-stones existed. He thought that some of these were cases of true neuralgia. Another case where a gall-stone was felt deep in the abdomen on the under surface of the liver the wound was plugged with gauze and four days allowed to elapse, after which the stone was cut down upon and removed successfully.—The President, Dr. Watson, and Dr. Tresidder spoke, and Mr. Chicken replied.—Mr. Chicken showed a microscopic specimen of an Adeno-fibroma of the Bile-duct from one of the cases described.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 28, 1896.

THE proceedings at the annual meeting of Fellows and Members of the Royal College of Surgeons of England, which was held on Thursday, Nov. 19th, will be found reported in another column. The greater part of the time—some two hours—was occupied by the meeting in discussion of the resolution moved by Mr. T. HOLMES and seconded by Dr. THOMAS MORTON, asking the Council under Bye-law XV.[1] to sanction the contribution of a substantial sum from the funds of the College towards the defence of the rights of Mr. R. B. ANDERSON. As do all the supporters of Mr. ANDERSON, Mr. HOLMES started, it will be seen, from the position that the rights guaranteed by the College under Sect. XV., which have been infringed and virtually destroyed in Mr. ANDERSON'S case, are the rights which he possesses as a registered Fellow of the College to practise surgery according to the customs and ethics of his profession and to recover his fees in a court of law. Mr. HOLMES naturally concluded that the action of the Council in affording the strongest moral support to Mr. ANDERSON by appointing two of its members to serve on the Civil Rights Defence Committee and by instructing its representative on the General Medical Council to forward in every way that seemed feasible the objects of the Civil Rights Defence Committee in the case of Mr. R. B. ANDERSON was evidence that the Council interpreted its obligations under the By-law in Mr. ANDERSON'S case in this sense, and he offered the warm thanks of the supporters of Mr. ANDERSON to the Council for the liberal way in which they had hitherto carried out the spirit of that by-law. Had moral support of Mr. ANDERSON and the Civil Rights Defence Committee by the Council of the College been sufficient to reinstate Mr. ANDERSON in his original position, to compensate him for the injuries and injustice which he has suffered, and to vindicate his professional rights, which are the common rights of the Fellows and Members of the College, there can be very little doubt that the interpretation put upon the bye-law by Mr. HOLMES, Dr. MORTON, MR. RIVINGTON, MR. ANDERSON, and many others, would not have been seriously challenged. But Mr. ANDERSON'S heroic efforts to obtain justice and compensation have brought him into a position of unprecedented difficulty. His action against the judges of Trinidad and Tobago, conducted by himself for seven days with great tenacity and ability, terminated in one sense most triumphantly for him, for he obtained a verdict from a Middlesex jury for £500 with a strong expression of opinion that the defendant had over-strained his judicial powers, but in another sense most unfortunately, for the late Lord COLERIDGE, in spite of the verdict, gave judgment for the defendant, on the ground that no action could lie against a judge. Mr. ANDERSON was therefore compelled to carry his case to the Court of Appeal, and that court has decided that all decisions of a judge, although they may contravene the most solemn covenants, and although they may be given wilfully and maliciously and contrary to law, are judicial decisions and cannot be made the groundwork of an action against the offending judge. This interpretation of existing law is not universally accepted in the legal profession, and it can only be tested and finally determined by an appeal to the highest judicial tribunal—the House of Lords; and it is necessary for Mr. ANDERSON to go on and carry his case to that tribunal, because if he does not further efforts in other directions, such as appeal to Parliament for obtaining redress, would be met by the statement that he had not exhausted his legal remedies. The appeal would cost £1000 and the issue of such an appeal is very doubtful.

But for the necessity for this appeal Mr. ANDERSON'S case would have been comparatively simple. The Civil Rights Defence Committee was originally formed to promote an appeal to the Privy Council for the purpose of reversing the illegal judgments of the Courts in Trinidad and Tobago, judgments which a Royal Commission has pronounced to be judicial persecutions and a public danger, and to enable Mr. ANDERSON to return in peace to Tobago. Had the committee been able to confine its attention to this appeal it might ere now have been able to bring its labours to a favourable conclusion, for subscriptions for the purpose of an appeal to the Privy Council, which had every prospect of a successful issue, would have been far more readily obtained, as a few hundred pounds would have sufficed. As it is, two appeals are necessary, and the money for that to the House of Lords may be spent with the sole result of confirming the Court of Appeal. It is not to be wondered at that, under these circumstances, there should be a strong desire on the part of members of the Council to escape from the apparent obligation of the College under the bye-law to obtain redress for Mr. ANDERSON not only by moral but by pecuniary support. The pressure of these circumstances is so great that untenable arguments against a contribution by the College are apt to be employed. For instance, Mr. MORRIS compared Mr. ANDERSON'S position to that of a man deprived of some parochial or other appointment and bringing an action against the guardians and to that of a member of the staff of a hospital asking for assistance from the College in an effort to prosecute the governing body, and maintained that if the principle were conceded in one case it would have to be conceded in others. Such cases are not parallel to the case of Mr. ANDERSON in which the common rights of the profession under the Medical Acts of 1858 and 1886 have been violated—rights which are confirmations of pre-existing rights belonging to all who possess diplomas from the licensing corporations. In point of fact Mr. ANDERSON'S case is unprecedented and not likely to be reproduced unless it should be left without redress, so that we are in accordance with the opinion given by Dr. THOMAS MORTON that "the Council could not expect to find a precedent and need not fear to create one." Again, it was contended by Mr. MORRIS that the rights and privileges referred

[1] "The Council will at all times protect and defend every Fellow and Member of the College who may be disturbed in the exercise and enjoyment of the rights, privileges, exemptions, and immunities acquired by him as a Fellow and Member or Member thereof."

to in the bye-laws were such rights as the right to attend lectures and to use the library and museum. If such privileges only were referred to the phraseology of the bye-law would be altogether inappropriate. The only authority which can interfere with a Fellow or Member in the enjoyment of these privileges is the Council itself, which can deprive a Fellow or Member of them if guilty of any offence carrying such a penalty. For the Council to undertake to defend a Fellow or Member thus deprived against such deprivation would be a *reductio ad absurdum*. The bye-law implies to an ordinary person defence against aggression by others, and the usual method of defence, if moral support and verbal interference fail, are by expenditure of money in proceedings at law.

After the all but unanimous vote of the meeting in favour of Mr. HOLMES' resolution, two dissentients only being found in forty-nine voters, it seems obvious that the obligations of the Council of the College ought to be legally defined. Until this has been done it seems undesirable to discuss the subject further, but as Mr. ANDERSON'S cause is languishing for lack of funds we may refer to a proposition made by Mr. HOWARD MARSH for a voluntary subscription from the profession. Voluntary subscriptions have been tried and have hitherto failed to raise any adequete amount of money, and yet voluntary subscriptions are to be encouraged in every way. If we may judge from the spirit of the meeting it is possible that there may exist in the profession sufficient enthusiasm to raise £2000; but we apprehend that the profession would far rather see the corporations contributing than contribute the whole amount by itself. As to obtaining the money from the public, Mr. RIVINGTON, who has had some experience in this matter, stated that he did not think the money could be raised unless the College, the British Medical Association, and other bodies headed the subscription list.

UNLESS all forecasts on the subject are to be discredited we have in the new Lord Mayor a capable and ambitious citizen altogether worthy to succeed Sir WALTER WILKIN and to be Lord Mayor in what promises to be one of the most interesting years of our national history. If he finds his religious place in a communion different from that which represents our national faith he will be able to show how much of the same spirit there is in his own. The Mansion House and its occupant have a strong hold on the affections and the imagination of Englishmen all the world over, and it is not too much to say that the root of this hold is as much in their association with the charity and liberality of London as with its commerce. The real Evangelical Union is at the Mansion House, and there is to be seen the nearest approach at present realisable to the Union of Christendom. It is there where men meet for religious purposes as they meet nowhere else—for healing the sick, for "considering the poor," for abating drunkenness, and for extending culture and virtue—the English bishop, the Roman cardinal, the Very Rev. the Archimandrite, the Dissenting minister, and the Chief Rabbi. There they all meet and are all one, not only on the platform but often over a cup of tea in the Lady Mayoress's room, and can hardly help smiling at the differences which so seldom allow them the pleasure of coöperation. The Lord Mayor, Alderman FAUDEL-PHILLIPS, comes to the chair imbued with these liberal sentiments and with the further advantage of a sort of hereditary prestige. The speeches of Lord Mayor's Day mostly included a reference to the fact that he is expected not so much to make a reputation but to sustain one made by his father thirty years ago and recognised by Lord SALISBURY in one of the handsomest acknowledgments that was ever made by a Premier of England to a Lord Mayor of London. A more powerful appeal to the genius of kindness that is in him could not have been made to the Lord Mayor than to be told by Lord SALISBURY that thirty years ago, when young in office and confronted as Secretary for India with the terrible problem of famine there, he found no more helpful and kind counsel than that of Sir BENJAMIN SAMUEL PHILLIPS.

Such is the Lord Mayor for the ensuing year—a year in which the unprecedentedly long and glorious reign of HER MAJESTY is to be celebrated—and one of the schemes which it was said his Lordship favoured for this purpose was the raising of a national fund for freeing the public hospitals from debt. This would require, it is said, from £800,000 to £1,000,000. Unfortunately, later accounts show that, whatever the Lord Mayor's sympathy with hospitals, he sees difficulties in the way of emancipating them from debt, and that he, with the Duke of NORFOLK and other noblemen and gentlemen of great influence, has selected another object upon which the enthusiasm and benevolence of the public may vent themselves worthily and so commemorate the *annus mirabilis* to which we have so happily come. It is proposed to endow the Queen Victoria Jubilee Institute for Nurses, of which the QUEEN herself laid the foundation and to which she gave £10,000 in the Jubilee year. It is unquestionable that this is an excellent institution for the training of nurses to nurse the sick in their own homes, and we could not look with indifference on any ordinary proposal to increase its means of doing good. But this is not an ordinary proposal or one made under ordinary circumstances. It cannot be compared for a moment in force of appeal with that of the hospitals of London, which are weighed down with an incubus of debt which painfully limits their usefulness and which almost threatens the existence of some of them. From the first account of the Lord Mayor's benevolent feeling towards hospitals it appeared that he contemplated a general subscription for the chief hospitals of the country as well as of London, and it soon appeared that the provinces were opposed to a scheme so large and general and were afraid that they might suffer by it. It does not follow, however, that a scheme for raising half the sum, say £400,000 or £500,000 in the metropolis for the benefit of its embarrassed hospitals would meet with any such opposition. Surely in such a year such a sum might be raised for such a purpose. In an ordinary year something like this sum has been raised for the benefit of one hospital alone. There is nothing unreasonable in thinking that five times as much could be raised in favour of all our deserving hospitals if associated with HER MAJESTY'S name and the fame of her sixty years of rule, unprecedented for, amongst many other things, the enormous advance it has seen in the efficiency of the Medical Act, brought about

in a great measure by the educational uses of our great hospital system worked by the gratuitous services of members of the medical profession. It would be pitiable to set one good cause against another as a means of commemorating an unprecedented reign. But we beg the Lord Mayor and the distinguished men who are anxious to lead the public in this matter to weigh for themselves the claims of these two objects. The hospitals exist and are committed to a scale of work for which their incomes are notoriously inadequate. Something must be done in the way of limiting that work more to the advantage of the actually necessitous classes. But whatever the restrictions which a wise administration may impose, their work is arduous and urgent in the extreme and should be considered by the nation in its moments of supreme gratitude. The very fact that the hospitals were overlooked in the Jubilee year make it reasonable that they should be remembered on this even greater occasion. Everything will depend on the way in which the authorities of hospitals bestir themselves. If they do not make their voice heard quickly they will lose a chance which cannot recur. Let it not be said that this is a mere metropolitan suggestion. The metropolis has its own duties and the adoption of this scheme seems to us its plainest duty. But there is nothing to prevent the provinces adopting it too in places where the same need exists as in London. We submit these considerations to the leaders of loyalty and charity in London, and especially to the Lord Mayor, in the confident belief that the cause we advocate is not to be surpassed either on its own merits or as a way of commemorating his own year of office and sixty years of QUEEN VICTORIA'S reign.

QUITE recently we had occasion to comment upon the degrees of manslaughter and their relation to the more serious crime of murder. As one illustration we cited criminal abortion in its legal and practical bearings. On the occasion referred to we noted the law as laid down by the late Baron BRAMWELL, and since upheld by HER MAJESTY'S judges—viz., that where a woman dies as the result of illegal measures taken to procure abortion upon her the agent is guilty of murder. Prisoners have been found guilty of the capital offence and have suffered the extreme penalty of the law, but this has been on rare occasions, for in the majority of cases the judges, although explicitly expounding the law as to the nature of the act and its logical result, have seen their way so to charge juries that the latter might consistently with their oath return verdicts of manslaughter instead of murder. Even when the judicial summing-up has apparently left no alternatives but conviction of the supreme offence and acquittal juries have exercised their privilege and found for manslaughter only. However clear the law may be on the subject there are many who cannot get rid of the sentimental bias that there is some extenuation of the offence of a person who feloniously slays another, not only without malice aforethought, but with every hope and desire that death may not ensue. We cannot conscientiously acquiesce in this reading of a juror's duty, for the act of the abortionist, and especially where he or she possesses medical knowledge, is done in cold deliberation and with the knowledge of the possible and not improbable consequences. There are, of course, degrees of guilt in different cases, and far be it from us to advocate relentless and unvarying rendering of justice. In some countries an option is left to the jury of returning a verdict of murder of the first or second degree, the criminal code recognising the absence or presence of express malice as the mark of distinction. Our own statutes are drawn on severer lines, so that if a poisoner is convicted it must be of murder pure and simple or of manslaughter. Against this harshness of the law we have an effectual set-off in the shape of appeal to the Royal prerogative for clemency, which is rarely denied when a jury recommends a convict to mercy. Nevertheless, the code NAPOLEON is to our minds simpler and lends itself less to a miscarriage of justice.

The foregoing remarks are suggested by a recent trial at the Glamorganshire Assizes before Mr. Justice MATHEW. TIMOTHY SIDDALL JONES, M.D., C.M. Aberd., and HENRY RICHARDS, medical assistant, were indicted for the murder of LILY MAUD CHALLENGER, a single person, upon whom it was alleged they performed an illegal operation to procure abortion. The deceased died from hæmorrhage. At the post-mortem examination of the body of deceased seven punctures were found in the posterior wall of the uterus. From the evidence it appears that the girl was taken to JONES'S rooms on more than one occasion. After the first visit some mixture was compounded at a druggist's shop, and the prosecution charged that this was for the purpose of inducing abortion; but, that failing in its object, the more severe procedure by instruments was adopted. It was proved that at the last visit chloroform was administered by RICHARDS and that JONES performed some operation. For the defence it was contended that some other person might have caused the injuries to the uterus, and that JONES might have been the victim of mischance when the girl went to him for advice. There can be no reasonable doubt, however, that the treatment of the woman by JONES was premeditated. She was taken to JONES by her lover because her periods had ceased. Numerous visits were paid to JONES, who, if guiltless, would assuredly not have procured the administration of chloroform at his rooms, and after an examination or operation, whichever it may have been, allowed her to go home. Even had he not illegally used instruments he must have known the peril to which deceased was exposed—a peril which had its fruition in death two days later. The girl resided with her parents, who were alike ignorant of her pregnancy and of her visits to JONES. If more were wanted to prove the guilt of JONES it was his remark on arrest: "I'm in a fine mess now. How much do you think I'll get?" The evidence against RICHARDS was less strong. Mr. Justice MATHEW charged the jury in no uncertain strain, and directed them, if they believed the evidence, to return a verdict of *murder* against JONES. As regards RICHARDS, he said it was open to the jury to convict him of murder or of being an accessory after the fact or to acquit him. In his case the second alternative was adopted and his punishment was five years' forfeiture of liberty. JONES

was found guilty of manslaughter, the verdict thus being directly at variance with the indication by the judge. His Lordship, in passing sentence of penal servitude for life upon JONES, remarked that the jury had "sought to secure that clemency which would probably have been extended by the Crown had they convicted of murder and recommended to mercy."

It transpired during the trial that JONES had given way to drink, and the judge ascribed to this the loss of his once honourable position and his prostitution of a great and noble profession. With his Lordship's remarks we cordially agree; but it is to be feared that apart from the degrading influence of excessive use of alcohol criminal abortion is woefully rife. It is to be hoped that JONES'S condign punishment will act as a deterrent to would-be abortion-mongers. We do not desire to speak disrespectfully of the mercy extended by the jury to JONES, but had they convicted him of the capital offence there is no doubt as to what the sentence upon him would have been. And who can say he did not richly deserve it?

Annotations.

"Ne quid nimis."

THE HOSPITALS AND THE STATE.

IN another column will be found a proposal from a correspondent for freeing hospitals from debt and insuring them an income in the future by making them State-paid institutions. Our correspondent appears to have considered the proposal which he makes only from one point of view—that, namely, of the members of committee upon whom the duty of obtaining voluntary contributions by persistent solicitation bears as a heavy and most irksome burden. Upon this point we most heartily sympathise with the managers of the hospitals; neither do we endeavour to conceal from ourselves how real and how serious are the hardship to themselves and the disadvantage to their work which the necessity of continuous appeal brings about. But the proposal to shift this burden bodily to the shoulders of the State is much too serious to be welcomed with acclaim as an obvious solution of the difficulty. Medical charity is too complex an undertaking to be successfully administered by any but the most tried hands, and the experiments which have been made in the direction of entrusting it to civil servants have not been so successful as to warrant any sanguine expectation that they would succeed if Colonel Watson's scheme were put in practice. The problem of finding pecuniary support is one of great magnitude and one the solution of which is indispensable to the carrying on of hospital work. But it is not the only problem, or the most pressing, or even the most difficult problem which hospital administration presents. The organising of the work so as to make it effective is more difficult and even more important as matters stand, and although there is much financial embarrassment to be surmounted or deplored it cannot be doubted that the hospital boards have arrived much nearer to a satisfactory solution of the problem of financing their institutions than they have to preventing the waste of power and material which results from the imperfect adaptation of means to ends. In such matters as the local distribution of hospitals, the organisation of out-door relief, the perfecting of in-door economy, and the adjustment of the relations between medical charity and private medical practice, there is not only much to be done but even much to be learnt, and it is no wise discontent which hurries the well-wishers of the hospitals to the impatient conclusion that it would be well to trust the whole matter, with all its possibilities of good and ill, to the probably incompetent hands of a staff of salaried officers of the civil service.

BUBONIC PLAGUE.

IN view of the conflicting reports appearing in the lay press on the prevalence of the bubonic plague in Bombay it may not be inopportune to quote some opinions given in the official report of a late epidemic of the same disease in Hong Kong presented this year to the home Government. The scourge was believed to be essentially "a filth disease." It prevailed chiefly in the poorer quarters of the native town, the mortality of the Chinese attacked reaching the abnormally high death-rate of 90 per cent. On the other hand, the mortality amongst the Europeans was very low. Outbreaks of the disease in China appear to be preceded by a prolonged scarcity of water, and it has been noticed that there is an immediate cessation of the epidemic on the advent of colder weather. The period of incubation was from six to nine days. It was observed that in many respects the visitation bore a striking resemblance to the description given in contemporary accounts of the "Great Plague" which ravaged London about the middle of the seventeenth century. The plague in the metropolis was immediately followed by a great fire, which effectually cleansed the town. A similar accidental purification of the native town of Hong-Kong, the condition and surroundings of which are notoriously insanitary, would not be an unmixed evil if unattended with loss of life. We are glad to learn that a paper on the Hong-Kong outbreak is to be read at the next meeting of the Epidemiological Society by Mr. Jas. Cantlie.

THE METROPOLITAN ASYLUMS BOARD AND THE BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

AT the meeting of the Metropolitan Asylums Board held on Nov. 23rd, at Spring gardens, Mr. R. M. Hensley moved the adoption of a report of the General Purposes Committee relative to the bacteriological diagnosis of diphtheria in the Board's hospitals. It was ultimately resolved that the existing arrangement, according to which this work is done in the laboratory of the Royal Colleges of Physicians of London and Surgeons of England, shall cease at the end of the current year, and that all such examinations shall thereafter be conducted under the general control of the medical superintendents of the several hospitals, the services of Dr. Sims Woodhead being retained during the year for the purpose of consultation in necessary cases. It is somewhat difficult to understand what reasons can be advanced by the Metropolitan Asylums Board for taking what must undoubtedly be considered a retrograde step as regards the bacteriological diagnosis of cases certified as suffering from diphtheria. As carried on the system, so far as we can gather, was not on all points a perfect one, and in all probability, as the result of the experience gained, considerable improvements would have been made in order that patients could be kept under observation in isolation wards until a diagnosis was arrived at, either clinically or on bacteriological grounds. The whole of the issues involved do not apparently come to the surface; otherwise it is impossible to imagine that the matter would have been settled, as it has been, without some preliminary experience being obtained as to the practicability of working the system that is proposed. It is certainly a step in the right direction to acquire facilities and make arrangements

for the bacteriological examination of patients at the different hospitals under the Board, but until these have been at work for some time and until it is seen how the personal element enters into the equation of obtaining comparable results in the different hospitals we should have thought that it would have been better to continue the arrangement entered into with the Royal Colleges. At present the statistics as regards bacteriological diagnosis from the various hospitals are all based on a common method of examination by one set of investigators, whilst under the new system there will, if former experience is to serve as any guide in the matter, be as many kinds of statistics as there are hospitals. In saying this we do not even wish to hint that the work will not be well done, but that it can be based on a common standard is out of the question; it must vary according to the experience and knowledge of the worker, so that even for statistical purposes the value of the figures obtained must be considerably modified, whilst as regards diagnosis different results must necessarily be obtained in different hospitals according to the bent of mind and preconceived notions of those who are entrusted with a new piece of work. In a matter of this kind which is of such importance to the public it would be well could everything but a desire for the welfare of the community be entirely eliminated, but we are afraid that in this case the question has not been decided entirely on such high grounds, though most of those who have decided this matter would be very much astonished to be told so. We understand that when the work was first undertaken by the Colleges it was in the hope that the system then inaugurated might gradually be extended and perfected until something corresponding to what is carried on in the United States and on the Continent might be set on foot in London. The idea originally kept in view has, however, not been carried out. After setting an example which has been followed in some of the large provincial towns the Board has taken a backward step instead of following to its logical conlcusion what had already been done.

THE METHODS OF OUR ANCESTORS.

OUR ancestors were in many ways better off than we are. Democracy, in its modern sense of being a state of affairs where everyone can interfere with everyone else, had not come into vogue, and generally people took life much more easily. A peer or a governor really was a governor and could do pretty well as he liked. We are led to these remarks by a passage in a delightful book called "The Girlhood of Maria Josepha Holroyd." The lady in question was a daughter of Lord Sheffield, who was President of Guy's Hospital. Miss Holroyd relates in one of her letters an instance of what would now be called a flagrant hospital abuse, and we give the story in her own words: "..... Papa has got into Guy's Hospital four Frenchmen, gentlemen and officers, who perhaps you may recollect something of their having been a long time confined on board a ship and at last escaped by swimming to shore; I forget the particulars. How melancholy to think that these gentlemen are most thankful for admittance to the hospital; but one of them, a very genteel young man, is almost eat up by the 'Itch,' and as it is a very extraordinary complaint, and they had no other proper place to put him into he is now in the same apartment with the lunatics. They have hardly a Shirt to their backs and neither Shoes nor Stockings. With the greatest difficulty they (four in a hackney coach) collected amongst them twopence to pay the turnpike. James went to the hospital to receive them and recommend them to the steward and offered them money by papa's desire. They refused accepting it, saying they should want for nothing there. What uncommon generosity of mind, for men who are not above entering into an hospital cannot be accused of false pride. Papa has sent Walpole to-day to get a lodging for the Itchy Man if he finds himself at all incommoded by his situation among the madmen. It really makes one's blood run cold to think what extremities hundreds are reduced to and what a number of melancholy stories there are that come to our ears" What a howl would be raised to-day were such a thing to be done. But it is a charming story and one hardly knows whom to pity most—the itchy man or the madmen. Perhaps the former is the more fit subject for compassion, for a lunatic ward at the end of the eighteenth century was not a desirable habitation.

OXFORD GRADUATES' MEDICAL CLUB.

THE winter dinner of this club took place at Limmer's Hotel on Nov. 19th, Dr. Henry Sutherland being in the chair. The club was declared to be in a prosperous condition, the number of members being at the present time 180. Two toasts only were proposed—"The Queen" and "Success to the Club, with a welcome to Visitors"—an example which might well be followed by other societies. The club was founded in 1884 and is a means of bringing old Oxford University men and fellow students pleasantly and conveniently together twice in the year.

PUBLIC VACCINATORS AND THE NEW SUPERANNUATION BILL.

THE absorbing nature of our professional calling often prevents us from looking after our interests as a class, and thus it happens that when any fresh legislation is enacted in which we are concerned we not infrequently go to the wall. The Poor-law Superannuation Act, which has just become law, makes provision for all Poor-law officers to receive a pension when, through age or infirmity, they are no longer fit for work. Section 19 defines the word "officer" as including "every officer in the service of an authority to whom this Act applies, whether his whole time is devoted to the duties of his office or not." Now superintendent registrars and registrars of births and deaths are appointed by the guardians, but inasmuch as they are paid under contract with the Board at so much per registration, it was thought that these officials might not come within the meaning of that definition. These posts are generally held by clerks to guardians, and so these gentlemen, in promoting the Bill, took good care that the office of registrar should be included, and consequently Section 19 expressly adds: "and for the purposes of this Act, superintendent registrars, and registrars of births and deaths ..... are deemed to be in the service of the guardians of the union in which their districts are situated." District medical officers come under the Act in the same way as clerks to guardians do, and they very frequently hold the office of public vaccinator as well, which is a post held under contract to do certain work at so much per successful vaccination. Their position, therefore, corresponds, in a word, precisely with Clerks who are also Registrars, and it would seem a grave injustice if they be not enabled to count their vaccination fees as a basis for superannuation, in the same way as the other officers mentioned. In our issue of Nov. 7th, p. 1320, we pointed out the grounds for that statement. But unfortunately district medical officers did not take such an active part in the framing of this statute as the other officers named, and consequently public vaccinators are not precisely and expressly mentioned. The Local Government Board has now expressed the opinion to one of our correspondents[1] that a public vaccinator "cannot be regarded as an officer as defined by" the Act. It is provided in Section 18 that the decision

[1] THE LANCET, Nov. 21st, 1896, p. 1493.

of the Local Government Board on points raised on the construction of the Act shall be binding and conclusive; and therefore nothing but fresh legislation can alter the arrangement as it now exists. We have no doubt that the Board has considered the matter carefully and has been guided by the best legal advice on the legal aspects of the question. Nevertheless, nothing could be more unjust, as matters now stand; the two cases are parallel, and yet Clerks who are Registrars can count the income from the latter appointment as a basis for superannuation, but Medical Officers who are Vaccinators cannot count their vaccination fees, although they are appointed to the post of public vaccinator by the guardians and are, to all intents and purposes, officers of the guardians. If not, under whom do they hold office? There is no doubt that there are some who rise from a perusal of this statute with the impression that it has been framed mainly in the interests of Clerks to guardians as a class without due consideration towards medical men, nurses, or some others who form the great body of the Poor-law service; and the statement that "the whole principle of the Act is based on the theory that only a comparatively small proportion of those who contribute will ultimately need superannuation," made by one of these gentlemen in his letter to us (Oct. 17th), does not tend to remove that impression. This was evidently in the mind of another correspondent, whose letter in THE LANCET of Oct. 31st states in unmistakeable terms the manner in which the Act must affect the nurses, and therefore the cause of good nursing, in Poor-law institutions.

MEDICAL ADVERTISING.

AN advertisement appears in the *Bradford Observer* of Nov. 21st with regard to lectures on medical subjects. A Mrs. Longshore-Potts, who states she is a doctor of the Women's Medical College, Philadelphia, is lecturing to women at the Theatre Royal, Bradford. The last lecture is to be on Saturday, Nov. 28th. "Subject: Maternity. Admission, 6*d*., 1*s*., and 2*s*. All lectures illustrated by limelight views, including many of art and scenery." We confess we should like to see the views of art and scenery which illustrate this lecture on maternity. Underneath this announcement are the names of various people who are said to testify to the genuine character of the lecturer, and these names include the Mayor of Bradford, clergymen, schoolmasters, and others who are supposed to have influence in the district. Such support is entirely wrong from whatever point of view it is looked at, for if the lecturer is a qualified practitioner these various gentlemen must know that it is entirely against all ethics of the profession to advertise in this way; while, on the other hand, if she is not entitled to practise in this country such support is calculated to deceive the public with regard to her position. In this case the lecturer certainly states in full what degree she lays claim to, but this is unfortunately not of much use to the public who mostly fail to discriminate one from another and seem perfectly satisfied in their own minds so long as they believe anyone is a "doctor," never stopping to think of the true meaning and value of the word.

EXORCISM OF GHOSTS.

A RECENT issue of the *Australian Medical Gazette* contains a brief but instructive report of the cure of a case of hallucinatory disorder. The patient, a man aged sixty years, had suffered for two years from subjective visual sensations. Not a day passed that he did not see a large number of spectral human figures, and believing himself to be haunted by ghosts he had become very despondent and melancholy. On seeking medical advice it was found that he had senile cataract. When this was removed by operation the ghosts fled and the man recovered his usual health. In this connexion we may cite the case of a tradesman in Berlin whose shop was haunted by apparitions resembling in appearance some of his deceased customers. He was an intelligent man, aware that he suffered from sensory hallucination, and made notes of his subjective impressions. In due time he submitted his eyes to examination and operation with the result of a restoration of normal vision and the immediate and final disappearance of his intangible visitors. The obvious teaching of the foregoing and similar cases is that in these modern days the person to be resorted to for the exoreism of spirits and demons is the ophthalmic surgeon. It may be suggested to those "spiritualists" who are open to conviction that curable aberrations of vision, plus unconscious cerebration, would account for a large proportion of the apparitions described in the periodicals devoted to the spread of spiritualism. We believe that certain phenomena which cannot be explained in this manner are generally due to imposture. Without doubt a large number of spiritualists honestly believe in the truth of what we cannot but regard as a monstrous delusion, but it is not easy to restrain a suspicion that others, and particularly "mediums," like the Haruspices of the Rome of Lucian's day, find it difficult to meet without exchanging a wink and a smile.

A METHOD OF INFILTRATING DENTAL AND OSSEOUS TISSUES FOR MICROSCOPICAL WORK.

AT a recent meeting of the Odontological Society of Great Britain Mr. Charters White gave the details of the method he adopts to demonstrate the presence of spaces in hard sections of dental and osseous tissues. The section to be treated must be ground moderately thin, to about one thirty-second of an inch, and then immersed in absolute alcohol for five minutes, and subsequently in ether for a similar period. It is next transferred to a thin solution of celloidin (three grains of celloidin to half an ounce of equal parts of absolute alcohol and ether). This solution is coloured red by the addition of fuchsine, the stain being added to the alcohol before the celloidin is dissolved. The specimen is allowed to remain in the solution for two or three days, after which it is removed and placed on paper to dry. The section is then ground to the desired tennity and mounted on balsam. The advantages of the process are—(1) the cavernous and tubular structures in dentine and bone are filled with a coloured medium, which prevents the balsam running into such spaces and so obliterating them; and (2) the section is rendered less brittle and can therefore be easily ground down without much fear of fracture.

THE LEEDS WORKPEOPLE'S HOSPITAL FUND.

CONSIDERABLE diversity of opinion has been manifested in Leeds on the subject of providing for convalescents in connexion with the Workpeople's Hospital Fund. The question, being one of much importance, has naturally led to a great deal of discussion both by speakers at the meetings and by newspaper correspondents, some taking the view that the treatment of convalescents is not a legitimate application of medical charity, and that a separate fund should be established for the special purpose, while others deprecate this course on the ground that it would favour isolated action and perhaps lessen the general amount subscribed for the maintenance of hospitals in the town. A further question then arose. Assuming it to be decided that the benefits of the Fund should be extended to patients during the stage of convalescence, would it be better for the association to acquire a convalescent home of its own, or, on the other hand, to subscribe to existing homes which would receive such cases as might be sent? The objection to the latter alternative was that the Leeds subscribers would have no

control over the management of the institutions in which their patients were accommodated, and ultimately it was decided to recommend the establishment of a Home in connexion with the Fund. The matter will be considered more fully at the next quarterly meeting.

SIR WILLIAM MACCORMAC.

SIR WILLIAM MACCORMAC has made excellent progress during the past week. An exploratory puncture made on Nov. 19th revealed the presence of a localised empyema, which explained the persistent fever and the continued debility. The empyema was at once opened up and drained with the best results, the fever disappearing and the appetite returning directly. Everything has gone on well since, and there is now good prospect that in a few more weeks convalescence will be established.

THE NOTIFICATION OF MEASLES.

THE sanitary committee of the county borough council of Wigan have, on the suggestion of Mr. Berry, their medical officer of health, agreed to try the experiment for a period of three years of a system of voluntary notification of the first case of measles which occurs in a household, for which certificate they will pay a fee similar to that for compulsory notification. The medical men in the district have consented to assist in the carrying out of the plan. Mr. Berry is of opinion that voluntary notification will be as effectual as compulsory and is anxious to see what can be done to control epidemics after being made cognisant of the first or early cases.

REGULATION OF MIDWIVES IN CHICAGO.

The *Medical Standard of Chicago* for November has an editorial notice of the recent action of the State Board of Health in regard to midwives. About 1150 practise in Chicago, and each of them is supposed to have a licence from the State Board of Health. But this availed nothing to prevent the evils of irregular and unscientific practice, criminal abortions, and septicæmia. These evils have attained to such magnitude as to call for the further interference of the State Board of Health. This authority has called on all midwives to register themselves within ten days, and has notified that if not so registered steps will be taken to revoke the licence. The Department of Health has also formulated rules for the guidance of midwives, insisting on their sending for a medical man in unusual cases. Provision is made for the poor having this additional advice without cost to themselves. There is, therefore, no reason, as our contemporary says, for mere midwives usurping the function of a physician. Registration is here used as a means of limiting and controlling the action of midwives.

THE PLAGUE IN INDIA.

THE *Indian Medical Gazette* for November, which has just reached us, contains several highly interesting articles descriptive of the outbreak of bubonic plague in India, and dealing with the nature and the clinical and bacteriological features of the disease. We can only call attention to them at the present moment, as we have not yet had time to analyse and consider the information contained in the pages of our contemporary. As might naturally be anticipated, the various medical and Anglo-Indian journals are pretty full of information bearing upon the same subject. The plague still continues at Bombay, and for a time the returns showed some increase in the number of attacks, but by the latest accounts the prevalence of the disease has slightly abated. The exodus of the people is still taking place and there has been a considerable panic among the natives, especially in connexion with the institution of measures for preventing the spread of the disease and for the segregation of sufferers from it in the infectious hospital at Arthur-road. Notwithstanding that the Government has shown every consideration for the prejudices of the natives and has striven to disabuse their minds of erroneous impressions, an assault on the hospital took place on Oct. 29th.

THE MOSCOW MEDICAL CONGRESS.

WE are informed that the following alterations have been made with regard to the officers of the Twelfth International Medical Congress to be held in Moscow on Aug. 19th to 26th, 1897:—The President of the Committee of Organisation will be Professor N. W. Sklifassowski; the Vice-President of the Committee of Organisation will be Professor J. F. Klein (President of the Executive Committee); and the Secretary-General will be Professor W. K. Roth.

THE APPOINTMENT OF AN ESSEX CORONER.

A CORONER should be a qualified medical man, and for this reason, even if for no other, we are glad to find that Mr. G. Vere Benson of Bedford-park, Chiswick, is a candidate for the office in Essex left vacant by the death of Mr. C. C. Lewis. Mr. Benson's experience of more than two years as deputy coroner for the Western division of Middlesex, in which capacity he has held over 200 inquests, is a sufficient guarantee of his fitness for the important duties of the office. He is, moreover, a barrister of eighteen years' standing, so that to the indispensable medical knowledge he adds the further advantage of a legal training. Even those who think that coroners should be selected from among the members of the legal profession must therefore admit his eligibility. We go further than this, and maintain that a medical man as such, if possessed of the requisite business capacity, is better fitted than a lawyer to preside in a court which is occupied mainly in the investigation of cases of sickness and injury resulting in death. Mr. Benson studied at St. Thomas's Hospital; he is a Member of the Royal College of Surgeons of England and a Licentiate of the Royal College of Physicians of London.

THE GLOUCESTER DISTRICT NURSING SOCIETY.

THE report of the Gloucester District Nursing Society has reached us and shows that the society did admirable work in the city and its vicinity during the recent terrible visitation of small-pox. Its record fully justifies the labours of the Dean of Gloucester (Dr. Spence), the mayor (Mr. A. Estcourt), the chairman of the sanitary authority (Mr. A. Woodward), Alderman Brown, Dr. R. W. Batten, the Rev. A. C. Eyre, Mr. H. E. Waddy (treasurer of the society), and Mr. George Whitcombe (chairman), to make provision for nursing the sufferers at their own homes, and those members of the public who subscribed funds towards this charitable object may now read the story of the good work in which they assisted. The nurses during the four months of the epidemic attended to the wants of 946 persons, including parturient women, either themselves infected, or living in infected dwellings. Over £200, besides a large amount of food, clothing, and other necessaries were distributed through their agency as a supplement to the supplies of the relieving officers, and perhaps the most valuable work of the society was done in this connexion, as the nurses acted as stop-gaps in cases of urgency, providing all the care and relief required during the first twenty-four hours, at the expiration of which time the guardians received the case from them. Miss Evans, the superintendent, to whom the discharge of all details was confided, receives from her committee a testimonial for "zeal, energy, skill, and devotion," which she has thoroughly

merited, the demonstration of this being the fact that, with a staff always fluctuating, and numbering at times from fifty to sixty persons variously employed, no single example of friction has to be reported.

CASES HEARD IN CAMERA.

CHARGING the jury at the Hampshire assizes, which opened at Winchester on Thursday, Nov. 19th, Mr. Justice Wills, speaking of the six or seven "grossly indecent" cases on the calendar, said he thought it hopeless to speculate on the causes which led to an increase in the number of such cases at any particular time. The publication of cases of this kind familiarised people with very nasty things, and set people who were that way inclined thinking of things to which they had much better not have had their attention called; but while this was to be deplored he hoped it would never come to pass, having regard to the greater good to be set against the evil he had pointed out, that they would see the day when these cases would be heard in secret. Publicity tended to prevent slipshod work on the part of the judge and the returning of absurd verdicts by juries, while it also might be the only means of thoroughly clearing the character of a person who might be perfectly innocent. We quite agree with the learned judge. Publication is a very different matter from publicity. The press certainly ought to be represented in court; but there is no need to publish revolting details in the papers.

A MEETING of the Royal Commission on Tuberculosis was held at 7, Whitehall-place on Nov. 18th, when the evidence of Mr. S. B. Provis, C.B., of the Local Government Board, and Mr. T. H. Elliott, of the Board of Agriculture, was given. The members present were Sir Herbert E. Maxwell, M.P., Dr. R. Thorne Thorne, C.B., Professor G. T. Brown, C.B., Mr. Shirley F. Murphy, Mr. John Speir, Mr. T. Cooke Trench, and Dr. T. M. Legge, Secretary.

WE are very glad to learn that there has been a good fall of rain in Bombay and throughout the Deccan, and rain has also fallen in Rajputana and at Allahabad and in most districts of Bengal; the rainfall in Behar has been heavy. The prices of grain are rapidly falling, and if the rain continues immediate danger of severe famine will, it is hoped, be averted.

REUTER'S correspondent at Cape Town, writing on Nov. 4th, says: "Dr. Edington, the colonial bacteriologist, has discovered the microbe of rinderpest, but no details of his discovery have been published."

WE learn that Dr. Cullingworth's solicitors have been served with a notice of motion for a new trial of the action Beatty *v.* Cullingworth.

SIR WILLIAM BROADBENT has been elected Consulting Physician to the Victoria Hospital for Children, Chelsea.

THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN.—The new Grosvenor Hospital for Women and Children now being erected in Vincent-square, Westminster, will contain twenty-six beds and will have a small operating theatre on the top floor. As paying patients will be received some of the wards will have only one bed each; none, however, will have more than five beds. The building is of red brick and terra-cotta; the style of architecture may be described as free North Italian Gothic. The foundation stone was laid last July by Lady Kortright, and it is hoped that the Princess Louise (Marchioness of Lorne) will open the hospital next season. The contractors are Messrs. Dove Brothers; the architects are Messrs. Roumieu and Aitchison.

THE REPORT OF THE ROYAL COMMISSION ON VACCINATION.

(*Continued from p. 1253.*)

THE VARIOLOUS TEST.

The Early Sources of Vaccine Lymph.

HAVING discussed the legislative and administrative proposals of the Commission and of the two dissentients, we revert to the earlier part of the Report. It is impossible, however, to give anything like a complete synopsis of its argument on the value of vaccination. The Report itself contains only a synopsis of the evidence which the Commission collected during seven years, the minutes of that evidence occupying several large volumes. The Commission also summarises the results of the investigations of Dr. Coupland, Dr. Luff, and Dr. Savill regarding outbreaks or prevalence of small-pox in Dewsbury, London, Warrington, Leicester, Gloucester, Glasgow, Liverpool, Oldham, &c. All this, together with the Commissioner's own deductions from the evidence, and their recommendations as to legislation and administration, being here condensed into about 150 foolscap folio pages, it seems almost hopeless to attempt any further condensation. Indeed, hardly a paragraph can be neglected by anyone who wishes to give even an approach to adequate consideration of the subject. The fault of the Report rather is that it is too much condensed already, and on various points a fuller statement or discussion would have been valuable to future students of vaccination. As it is, however, we would strongly advise every medical man to purchase the volume for himself and to read every word of it. It costs only 1*s.* 10*d.* and it is very rarely that in medical literature anything so interesting and so permanently valuable can be got so cheaply. Let us further advise the reader that, having bought the volume, he should begin by a careful perusal of the statement by Dr. Collins and Mr. Picton, after which he should turn to the Report itself, in order that he may weigh for himself the deliverance to which the dissentients refused to append their names.

The first question dealt with is "the effect of vaccination in reducing the prevalence of, and mortality from, small-pox." The Report begins by stating that more attention will be paid by it to facts than to theories, and that the question will rather be, Does vaccination prevent small-pox than How is its protective power to be accounted for. While, however, a detailed scientific enquiry would be beyond the scope of the Report this side of the subject is not to be altogether neglected.

After a passing reference to Jesty, the Dorsetshire farmer who purposely inoculated his family with cow-pox in 1774, the Report at once proceeds to the discussion of Jenner's "Inquiry" of 1798 and of the early history of vaccination. In his Inquiry Jenner recorded nineteen cases of casual cow-pox which were afterwards insusceptible to small-pox either under ample exposure or by inoculation. He records also cases of intentional inoculation of cow-pox (vaccination) done by himself and carried on to the fifth remove. Four of these cases were submitted to the variolous test, one of them repeatedly. In an appendix the Commission enters on a very interesting detailed discussion of the variolous test, which played so considerable a part in causing Jenner and the medical profession to accept vaccination as a preveptive of small-pox. In the practice of small-pox inoculation the symptoms following on the inoculation remained local until the seventh or eighth day, and then there began a general constitutional disturbance known as the eruptive fever or fever of invasion. This subsided soon after the appearance of the eruption of small-pox on the body, about the end of the tenth or on the eleventh day. These pustules began to suppurate about the thirteenth or fourteenth day, and the suppuration was accompanied by a secondary fever, varying in degree according to the extent of the eruption. This latter fever was looked on as merely an accompaniment of the eruption. Wherever, of course, there was a general eruption it was obvious that small-pox had been successfully inoculated and that the patient had thereby obtained the protection against small-pox which a previous attack confers. In a small percentage of cases, however, there was no eruption, and here the question arose among inoculators, Had protection against future small-pox

been produced by the operation? Among those who were best qualified to judge the answer was held to depend on the occurrence or non-occurrence of the eruptive fever. If general constitutional disturbance resulted at the proper time after the insertion of the variolous virus it was held that this indicated that the "system" had been "affected" and immunity secured. Where there was doubt the operation was repeated, and its repetition constituted the variolous test as applied to variolation itself. If the second inoculation resulted in an eruption or in an eruptive fever, then the former operation had been a failure; if, on the other hand, the second operation produced only a local effect, it meant that the first inoculation had produced immunity or that the person was otherwise immune. The merely local effect, therefore, was looked on as of little consequence in reading the result of the variolous test. Sometimes the wound healed immediately, at other times there was more or local less inflammation: occasionally there was a vesicle or a pustule containing variolous matter, which was itself capable of giving ordinary eruptive smallpox by inoculation on other persons. Even in this last event, however, the mere fact that small-pox could be locally cultivated on the arm was not looked on as any indication that the "system" had been unprotected or that there had been any genuine susceptibility to small-pox by either inoculation or infection in the ordinary way. All these conclusions were the results of accumulated observation and experience and were the common property of the medical profession at the beginning of the century.

The application of this variolous test to cow-pox had had a large share in the formation of Jenner's own opinions. It is to be observed that the test had not at first been intentionally applied. What had happened was that small-pox inoculators in the dairy counties in the course of their practice had met with a considerable number of persons who were insusceptible to inoculation—who developed neither the eruptive fever nor the eruption itself; and it gradually came to be observed that, allowing for a small percentage of persons insusceptible to small-pox, the great bulk of the individuals who could not be affected by variolation had already suffered from cow-pox, and the conclusion was reached that no other cause than this cow-pox could be found to account for their refractoriness to small-pox inoculation. The issue, however, was not perfectly clear, as some persons who had had what had been called cow-pox were found susceptible to small-pox, and regarding such cases Jenner arrived at the conclusion, as published in his Inquiry, that the disease which such persons had received from the cow must have been different in nature from that teat eruption which had infected so many who were afterwards found insusceptible to small-pox. Besides reporting on the test as casually applied in a number of cases, some of them many years after their having had cow-pox. Jenner purposely tested four of the vaccinations recorded in his Inquiry, with the result that they were found insusceptible to small-pox. So, also, in the early years of vaccination, both in this country and abroad, the variolous test was very largely applied "and the inoculators of cow-pox appear to have used the variolous test for immunity in the same way and under the same conceptions as did the old inoculators for small-pox." This is the conclusion of the appendix devoted to the variolous test. In the report itself there is the further statement regarding the medical profession: "Nor is there any reason whatever to think that their attitude of mind was different when they used inoculation merely as a test of insusceptibility from what it was when they used the operation with the intent to provoke the disease." To anyone who has not read the minutes of evidence this deliverance would seem almost unnecessary and it requires the explanation that one witness had advanced the theory "incredible" even to himself—though that seems paradoxical—that the medical profession (both here and abroad it must have been) had carefully and elaborately deceived itself and its patients by declaring, regarding the results of the test as applied respectively to small-pox and to vaccination, that the appearances which in the former case indicated that the individual was susceptible to small-pox, indicated in the latter case that he was not susceptible to small-pox. It is hardly surprising that the author of this theory should himself describe it as incredible.

Having decided that the variolous test was a valid test and that it was employed in a valid manner the Commission proceeds to discuss the early sources of the vaccine lymph. The thoroughness with which the Commissioners have considered some of the historical questions is nowhere better shown than in the appendix dealing with the "Reports" on cow-pox cases by Dr. Woodville of the Small-pox Hospital in the year 1799. Yet in entering on this subject the Commission makes a curious mistake, as to which it does not appear to have had the benefit of correction by the two dissentients. Woodville and Pearson are spoken of as "physicians to the Small-pox Hospital in London," whereas only the former was so, the latter being physician to St. George's Hospital. It is probably this initial error which has led the Commission to assume in Section 19, without discussion, that the lymph which Pearson distributed on 200 threads in 1799 was "lymph from the hospital." Contemporary records show that Pearson and Woodville were both very actively engaged in vaccination and that they were thrown much together, and it may be taken as certain that Pearson did get more or less lymph from hospital cases. We are not aware, however, of any actual proof that Pearson's 200 threads sent to medical practitioners in England and elsewhere consisted of hospital lymph, or of any proof that the lymph on the 200 threads was all from one source, whether the hospital or elsewhere. On turning to the published volumes of Minutes of Evidence it would appear that the error as to Pearson's official relation to the small-pox hospital has arisen through the Commission's acceptance of a statement by Professor Crookshank, who on being repeatedly pressed by Professor Michael Foster for proof that the lymph issued by Pearson was Woodville's lymph, finally replied: Q. 11,189. "Because Pearson and Woodville were the physicians to the small-pox hospital, and Pearson sends out a thread with a letter, and it is followed by the same results as they had at the hospital." It may be noted in passing that in addition to the error here contained regarding Pearson's physicianship, the latter part of the reply is not at all in accordance with Pearson's own declaration in the *Medical and Physical Journal*, that with a rare exception his correspondents did not report any general eruption after the operations done with the lymph which he had distributed among them.

With regard to the early sources of vaccine lymph the Commission has done well in calling attention to a fact that has not sufficiently been kept in view in discussion of Woodville's cases—the fact, namely, that there is ample indication of the use and distribution of lymph from various other sources than the hospital by Jenner and Woodville and Pearson. In the *Contemporary Review* for October Mr. Picton states quite properly that he cannot enter on the technical and intricate argument regarding Woodville's cases, though at the same time he calls attention to the "masterly investigation" of them by Dr. Collins. This investigation is published as part of the dissentients' Statement, and it is interesting to observe that in spite of the ability displayed by Dr. Collins in making the best of a bad case, and in spite of the fact that along with Mr. Picton he took a share in the preparation of the Commission's Report, and, as we may safely assume, in its modification in the interests of antivaccination wherever they could satisfy the Commission that there was ground for modification, yet Dr. Collins was quite unable to get Lord Herschell to adopt the views set forth in his "masterly investigation" or to prevent him from arriving at a conclusion diametrically opposed to that of the dissentients. The fact is that the trained intellect of a Lord Chancellor of England is not the least likely to be imposed on by even the best coined logical counterfeits from the antivaccination mint. Of Lord Herschell's responsibility for the Report of the Commission of which he was chairman there can be no manner of doubt, but the opinion that his lordship was the writer of the Report comes from the chairman of the antivaccination executive, Mr. Hopwood, Q.C. and ex-M.P., and we need not wait to discuss whether the publication of the opinion was an indiscretion on the part of anybody. Anyhow, regarding the early vaccinations the conclusion of Lord Herschell and the Commission is that (excluding the cases in which matter was taken from eruptive pustules) the lymph used and distributed by Woodville and Pearson "was veritable cow-pox lymph having the true characters of cow-pox lymph only."

It is to be observed, further, that the confusion created by Woodville's publication of his opinion that cow-pox was often an eruptive disease was very short lived. Immediately after his pamphlet was issued he wrote (June, 1799) to the *Medical and Physical Journal* giving information which he says "I deem of considerable importance, as it leads to a conclusion widely differing from that published in the Reports." But with regard to the variolous tests the opponents of vaccination

have recently attempted to give to Woodville's eruptive cases an altogether fictitious importance. By a contemporary authority no less reliable than Dr. Robert Willan, we are told that many thousands of other cases were tested by epidemic exposure or by variolation by thoroughly competent medical men, that he himself had tested or had witnessed the testing of many cases, and in a series of plates he depicts in quite an unmistakeable manner the results of such tests. It is only therefore by closing the eyes to obvious and incontrovertible facts that any such statement can be made as that of Mr. Picton in the *Contemporary Review* that "the case for Jenner almost exclusively rested on Woodville's operations." On the contrary, Jenner's criticism of Woodville's reports was perfectly well known to the whole profession. As is stated by the Commissioners, he "maintained from the very first that the eruptive pustules were indications of small-pox"; and looking to the rarity of eruptive cases, excepting under circumstances where, as in the small-pox hospital, there was opportunity of exposure to infection by small-pox in the ordinary way, no other conclusion is tenable than that atmospheric infection, and not the insertion of small-pox matter in mistake for cow-pox, was the great agency in producing eruptions in many of the cases which were operated on from arm-to-arm. Every science and every art profits by its own blunders, and in this sense at least Woodville's mistakes were probably worth a good deal by emphasising the fact that genuine cow-pox is not an eruptive disease. The tests of variolation and of exposure to epidemic small-pox which continued to be made after Woodville's errors had cleared the air were more than ample to prove the protective power of cow-pox, and throughout all the years since Jenner's time, proof of every conceivable sort has continued to accumulate in confirmation of the results of those early tests which were carried out not only in England but also on the Continent and throughout the world wherever vaccination found its way.

AUTOMOTOR TRAFFIC.

ALTHOUGH the motor-car run of Nov. 14th was not the success hoped for enough was done to show that mechanically propelled street traffic is at any rate possible. The vehicles which have at present been built probably bear no more relation to the actual horseless vehicles of the future than do "Puffing Billy" and "The Rocket" to the marvellous triumphs of engineering which are now to be found upon the iron ways of the world. It is probable, also, that the kind of locomotion to which we are referring will have bearings as important and far-reaching upon trade and commerce and, we may say, health as railways have had. Already the feeding of light railways by means of motor-propelled vehicles in order to bring the produce of market gardens to towns is being discussed; and at least two municipal councils—those of Dover and Dorking—are seriously contemplating the use of motor carts for scavenging purposes. Cars for delivering goods have also been built, and if all that is claimed for them is true there should be a considerable lessening of the cost of transit.

The points of view from which motor traffic may be regarded are many, but those that force themselves most obtrusively upon our notice are the bearing upon health and the utility to the public. With regard to one of these points we have already pointed out some of the directions in which motor traffic may confer a benefit upon the community in general. With regard to the other the most important matter which it is necessary to consider is the pollution of the atmosphere, and this more particularly applies to vehicles which are propelled by motors whose source of energy is steam or petroleum. In large centres and crowded towns nothing is more important to the public health than pure air. Statistics show the most important factor in the causation of disease to be impure air, and anything which tends to increase its impurity deserves the utmost consideration. Both steam and oil motors as at present constructed produce a certain amount of waste or by-products which vitiate the atmosphere and add largely to the inorganic impurities which it contains. One of the principal causes of this is imperfect combustion. As the motors become more perfected this objection to their use will, no doubt, be removed, but at present the soot and tarry products, which are given off together with carbon dioxide and monoxide and sulphurous and sulphuric acid, will prevent motor traffic becoming at all general. In hot weather the presence of a number of oil- or steam-propelled vehicles in our crowded thoroughfares would be simply intolerable. On the other hand, the absence of horses will necessarily lessen the amount of carbonic dioxide in the air as well as organic impurities, and it may be that the presence of electrically propelled vehicles will be the cause of a most desirable addition of ozone to the air of towns.

And this leads us to consider the advantages which will accrue to the public if electrically propelled vehicles can only be made practicable. At present they are put out of the field, at any rate for light vehicles, by reason of the weight of accumulators and the trouble and expense of re-charging the batteries. Both these difficulties are said to have been overcome by the London Electric Omnibus Company, but beyond the statement we have seen no practical proof that this is so. The difficulty of re-charging batteries might be easily overcome if the electric lighting stations would afford facilities for this purpose, and this they should be able to do even where the current generated is an alternating one. Such a use of electric lighting stations which practically remain idle during the day should give a valuable additional source of income to electric lighting companies and might induce them to extend their stations, much to their own advantage and to the advantage of the owners of electric motors. The absence of horses, too, would have the important effect of lessening the hideous hum which prevails in our more busy streets day and night. The clatter of horses' feet would be entirely done away with and the wheels of the vehicles would for the most part run silently.

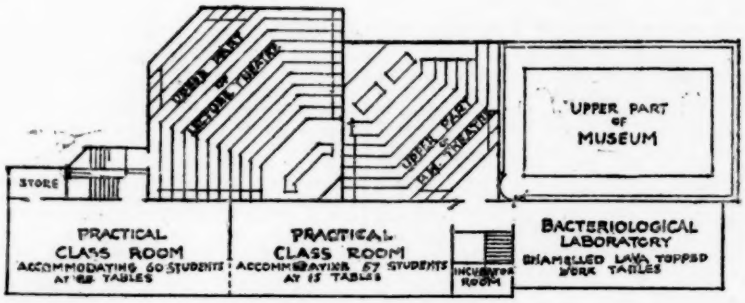
In short, a really practicable motor which would not be responsible for any of the evils we have pointed to would confer a blessing upon the community from the point of view of health and comfort and open up possibilities for trade which it is impossible at present to estimate.

DIPHTHERIA IN LONDON.—As compared with its three predecessors, the first week of the present month showed a decline in the mortality from diphtheria in London. In the concluding three weeks of October the registered deaths from the disease in the metropolis were 66, 57, and 64 respectively, whilst in the week ended with Nov. 7th they fell to 53, though still 5 in excess of the corrected decennial average for the forty-fifth week of the period 1886–95. Camberwell was credited with 6 deaths, and Islington, Hackney, Lambeth, and Lewisham sanitary areas each with 5 deaths. Three of the total deaths were in infants, and 1 only in a person aged over twenty years. The admissions to hospital in the week numbered 115, against 105, 105, and 122 in the immediately preceding weeks; and on the last day of the week there remained under treatment 813 patients, as compared with 720 two months earlier. In the week ending Nov. 14th the deaths increased again to 60, and were 16 in excess of the corrected decennial average for the forty-sixth week of the year. Islington is credited with 7 deaths, Poplar with 6, and Chelsea, Lambeth, and Camberwell sanitary areas each with 4 deaths. On Nov. 14th the number of patients suffering from diphtheria still in the London hospitals had fallen to 796. During the first two weeks of the present month the registered deaths from diphtheria numbered 28, of which 13 occurred in the West Ham registration district. These data show in the county and outer ring of London 141 deaths from diphtheria in the two weeks as compared with 145 in the preceding fortnight.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—A meeting of the Scottish Division of this association was held in the hall of the Royal College of Physicians of Edinburgh on Nov. 12th, and was well attended. Dr. McDowall, Northumberland County Asylum, was in the chair. Dr. Charles Macpherson, Deputy Commissioner in Lunacy for Scotland, was proposed for the membership of the association and duly elected.—Dr. W. Ford Robertson, Royal Edinburgh Asylum, showed and described microscopical preparations illustrating the Structure of the Neuroglia, and in connexion therewith discussed Weigert's views regarding the relationship of the cells and fibres.—Dr. Urquhart, Murray Royal Asylum, read notes of a Visit to the Department for Nervous and Mental Diseases in the Communal Hospital, Copenhagen.—A paper by Dr. Campbell Clark, Lanark District Asylum, on Changes and Complaints in Asylum Service was read and led to an animated discussion.

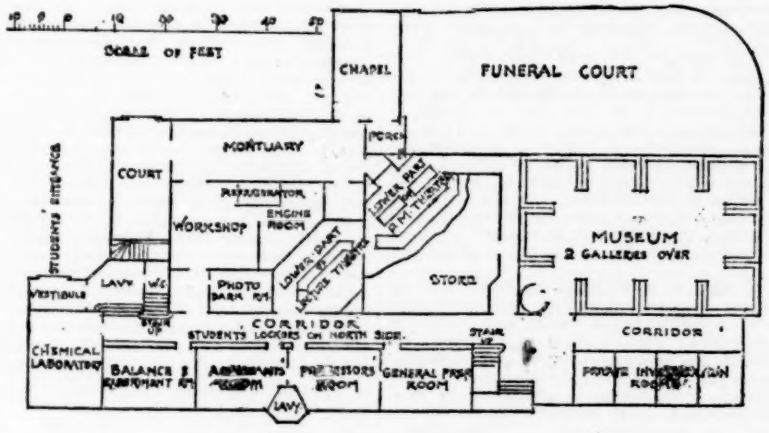
THE NEW PATHOLOGICAL INSTITUTE AT GLASGOW.

THE Western Infirmary and the Medical School of Glasgow University may well be proud of the Pathological Institute which has been recently opened in their city. The study of pathology is of such infinite importance as a handmaid of medicine and surgery that every encouragement and facility should be offered to those who work in this field, and in the new buildings Professor Coats has, to judge from the plans and descriptions we have seen, as well-equipped a workshop as anyone could desire. The building consists of two floors and is lighted throughout by electricity. On the ground floor are a chemical laboratory, a balance-room, rooms for the professor and his assistants, and a laboratory for private research. There is a museum equipped from the existing university and infirmary pathological departments, a post-mortem theatre and a mortuary; neither is reverence for the dead neglected, for there is a mortuary chapel. Besides these there are a lecture theatre with a photographic dark room attached, various workshops, and the engine-room. On the upper floor are the upper portions of the two theatres and the museum, two practical class-rooms, and a bacteriological laboratory. The building cost some £15,000 and was designed by Mr. John Burnet.



PLAN OF FIRST FLOOR.

At the opening Professor Gairdner delivered an address upon the place of pathology in medicine and its relation to public health. In pointing out how pathology had advanced he said "it was only when the pathologist undertook to investigate the entire life-history as written in the framework and organs of the body that his science became more than a chronicle of ruins, misleading to some extent even as to those very processes of decay which made the ruins. By the careful, deliberate, and often toilsome investigation of every organ and part of the dead body processes of healing are taught side by side with processes of destruction, the methods and the capabilities of repair, as well as the results of fatal disease and injury. And to every wise and open-minded physician and surgeon the service thus rendered even by death—the last and worst triumph of adverse nature over all his efforts—may often be made such as to convert what is a disaster to the individual into a real benefit to humanity at large. To the wise and far-seeing physician," concluded Professor Gairdner, "*Nec silet mors* is as much the motto of his art as it is of the Pathological Society of London, and to the medical or surgical clinical teachers it is the very touch-stone, the Ithuriel's spear, that distinguishes the true from the false, which infallibly marks off the man who, as a teacher, is also a learner from him who desires in teaching simply to glorify and display his own art."



PLAN OF GROUND FLOOR

MEDICAL MAGISTRATE.—Mr. Walter A. Ward, M.R.C.S. Eng., has been placed on the Commission of the Peace for the borough of Richmond, Surrey.

ELECTION OF DIRECT REPRESENTATIVES TO THE GENERAL MEDICAL COUNCIL.

MR. RIVINGTON'S CANDIDATURE.

WE have received the following letter with a request for its publication:—

To the Registered Medical Practitioners of England and Wales.

GENTLEMEN,—As the voting-papers are issued to you this week and you will during next week be called on to record a vote which will for five years direct the policy and control the action of the representatives whom you elect to the General Medical Council, we desire to again invite your careful consideration of the issues placed before you, and especially of the following important objects, to help us to attain which Mr. Rivington has been invited to come forward as a candidate at this election.

1. To bring the influence of graduates, Fellows, Members, and Licentiates by means of their universities and corporations to bear on the General Medical Council, and thus to secure its active coöperation and support in upholding the rights and interests of the profession.

2. To maintain that the true interest of the public is in every respect identical with that of the profession.

3. That all irregular and unlicensed practice, medical aid societies, counter prescribing by chemists, and hospital abuse are as contrary to the true interests of the public as to those of the profession, and should be restricted and suppressed either through the General Medical Council or, where necessary, by strict enforcement or by amendments of the laws, bringing home a full responsibility for all ill consequences to those who, without proper qualifications, undertake to practise medicine, surgery, or midwifery, and that all amendments to the Medical Acts necessary to secure these objects should be promoted by the General Medical Council and the Corporations.

4. That to license unqualified persons to practise midwifery in "safe cases" is impracticable, because "safe cases" cannot be known till they are over, involves a danger to the lives of poor women and is therefore an injury far more serious to the public than to the profession.

5. That all cases of midwifery, disease, or injury should, for the benefit of the people, be attended by qualified practitioners or by their advanced pupils under their personal care and supervision, for which care and supervision practitioners should be properly remunerated.

6. A single portal for each division of the kingdom.

7. Increased direct representation on the General Medical Council.

By electing Mr. Rivington and consistently supporting this policy with our universities and corporations the services of the General Medical Council may be utilised for the good of the profession and the State. It is the only practical and hopeful policy of reform brought forward since the Council was established (for it is not possible to obtain a *majority* of Direct Representatives or a redistribution of seats), but the carrying out of this policy and the realisation of these hopes depend on the earnest support of the profession.

You are asked to read Mr. Rivington's address[1] and our appeal herewith, and to give at least one vote for Mr. Rivington and this Practical and Hopeful Policy.

We are, Gentlemen, your obedient servants,

TIMOTHY HOLMES,
Chairman Mr. Rivington's Election Committee.

ROBERT BARNES,
GEO. D. POLLOCK,
J. WARD COUSINS,
JOSEPH SMITH,
} Vice-Chairmen.

W. G. DICKINSON,
R. B. ANDERSON,
} Hon. Secretaries.

A well-attended and enthusiastic meeting of the profession was held at the town hall, Wandsworth, on Wednesday, Nov. 25th, 1896, Mr. Arthur Howell being in the chair. Mr. Rivington gave a full exposition of his policy. He explained his work on the Medical Teachers' Association, of which he had been secretary and which had agitated and secured great improvements in the system of medical education and also his active part as vice-dean of the London Hospital in correction of abuses and remedy of grievances, and showed that he has always been in advance of current thought in the profession on all questions of reform. He demonstrated that to influence the corporations is the only hopeful mode of securing measures on the General Medical Council as at present constituted. The resolutions of confidence in Mr. Rivington and adoption of his policy passed at previous meetings having been ably proposed from the chair and seconded the following amendment was moved by Dr. R. H. Barkwell, and seconded by Dr. W. F. Terry: "That this meeting thanks Mr. Rivington for his address and the reforms he is prepared to assist in carrying out; regrets that owing to his being a consultant it cannot support him as a direct representative; but would welcome him to a seat on the General Medical Council as a Crown or corporate representative." Mr. W. G. Dickinson reminded the meeting that it was only by themselves working for these objects in forming and expressing public and professional opinion that their objects could, or ought to, be gained. Mr. R. B. Anderson pointed out that the aspiration of some speakers, such as redistribution of seats, could only be gained through Parliament, and also that it was not very likely if the profession did not elect a man of Mr. Rivington's views and policy that the Crown or corporations would do so. Mr. Rivington, in reply, said that had he acted in the spirit of the amendment he, as a consultant, would not have worked for reforms in the interest of the general practitioner, but he had always made the unity of the profession his guiding principle, and he believed it was a better course than that of maintaining and accentuating divisions and class distinctions. On the amendment being put only the mover and seconder supported it, and on the resolution being put it was carried *nemine contradicente*.

[1] THE LANCET, Oct. 10th, 1896.

THE CANDIDATURE OF DR. GLOVER, DR. DRAGE, AND DR. WOODCOCK.

A MEETING of the medical men in the town and neighbourhood of Bedford was held on Friday, Nov. 13th, to support the candidature of Dr. Glover, Dr. Drage, and Dr. Woodcock, and was addressed at some length by Mr. Victor Horsley and Dr. Lovell Drage. Mr. R. H. Kinsey was voted into the chair, and insisted strongly on the necessity of every medical man taking a personal and active interest in the numerous and important questions which affect the corporate as well as the individual life of the profession. He pointed out that the real interests of the public and of the profession are identical. Mr. Victor Horsley explained the position and action of the General Medical Council and the working of the Medical Acts. He pointed out the desirability of general practitioners being represented by members of their own body as necessarily more in sympathy with their difficulties and aspirations, and he dwelt on the special claims of each of the above-named candidates. Dr. Lovell Drage related in detail the views entertained by himself and those with whom he was associated on the subjects of the registration of midwives, medical education and examinations, on the unity of the profession, and the relations of consultants and general practitioners. Both his views and those of Mr. Victor Horsley commended themselves entirely to the feeling of the meeting, which was strongly in favour of the three candidates, Dr. Glover, Dr. Drage, and Dr. Woodcock.

THE IRISH MEDICAL ASSOCIATION AND POOR-LAW MEDICAL REFORM.

WE have been requested to publish the following letter:—

IRISH MEDICAL ASSOCIATION,
ROYAL COLLEGE OF SURGEONS IN IRELAND,
November 17th, 1896.

From the Council of the Irish Medical Association to the Right Hon. the Chief Secretary for Ireland.

SIR,—The Council of the Irish Medical Association, having anxiously considered the observations which you are reported to have made to a deputation which waited on you, on the 6th inst., with reference to the grievances of Poor-law officers, feel it their duty to correct, respectfully, certain misconceptions which you appear to entertain, and which, it is believed, may operate against the cause of Poor-law Reform which this Council maintains. These misconceptions appear to be—

1. "That it is the practice in Ireland not to charge a lower fee than

the proverbial pound or guinea." The Council, being intimately acquainted with the conditions of medical practice throughout Ireland, is enabled to assure you that this statement is absolutely inaccurate. A very few Poor-law Medical Officers who enjoy lucrative private practice expect to receive, in exceptional cases, the guinea fee at each visit or each second visit; but it is not from these that any protest against the existing Medical Relief system proceeds, for they are quite willing to attend, without fee, all who declare themselves unable to pay, and who may, by any stretch of imagination, be supposed to be so. Other practitioners expect to receive the fee of £1, and are willing to visit several times for that fee. Another and still greater number of practitioners are willing to attend patients for fees as small, in many instances, as those accepted by general practitioners in England, and it is a gross injustice that they should be deprived of such fees by the indiscriminate issue of medical relief tickets to persons admittedly capable of paying such fees. But, in fact, the Poor-law medical officers of Ireland have never protested against having to attend patients gratuitously who are unable to pay even a small fee; they do solemnly protest against the existence of a system which enables persons, who are frequently in a much better financial position than the medical officer himself, to obtain the medical relief which was provided for the sick poor, thus taxing the medical officer and the ratepayer for the cost of the medical attendance and medical and surgical appliances which such patients are well able to pay for. It is scarcely necessary to point out that some body must provide with an income the medical practitioner who attends the community. In England the community pays its doctors directly, because all who are competent to pay do so; in Ireland the ratepayer has to pay the greater part of the cost of maintaining the local practitioner, because those who would pay if resident in England are permitted to take advantage of the medical relief system, which was, and ought to be, provided for the benefit only of the sick and destitute poor.

2. You are reported to have argued that Poor-law Medical Officers are not entitled to the privileges of civil servants because they do not devote their whole time to their duties. The Council begs permission to point out that this objection has been disposed of by the Act 32 and 33 Vic., cap. 50 (Aug. 2nd, 1869), which declares that a medical officer may receive a pension "notwithstanding that such medical officer shall not have devoted his entire time to the service of the union"; and also by the English Superannuation Act of 1896, which makes a similar declaration. It is, moreover, scarcely correct to say that Poor-law medical officers are not required to devote their whole time to their duties. As a fact every moment of the life of such officers—day and night—is retained for such duties, and their functions impose a much greater demand upon the officers than in the case of a civil servant who gives a certain number of hours daily to his business and for the rest of the day and night is entirely free of official obligation. We beg, also, respectfully to remind you that the Local Government Board for Ireland has recognised medical officers as civil servants, inasmuch as it has, by its order, applied to them the regulations for pension authorised by Parliament for civil servants only. The Poor-law medical officers of Ireland are quite willing to submit themselves to all the limitations imposed upon civil servants, but they respectfully object to be subjected to these limitations, and to be then told that they are not civil servants at all, and are not entitled to any of the privileges of such servants.

As regards the superannuation of Irish Poor-law officers, the Council of the Irish Medical Association, acting in concert with the Council of the Poor-law Officers' Association of Ireland, most respectfully entreats you to put an end to a controversy which has occupied public attention for more than twenty years, by passing as a Government measure a Bill which will provide pensions for Poor-law officers upon the same basis as that of the English Bill. To induce you to do so the Council begs respectively to submit—

(a) That the extension of the English Poor-law Superannuation Bill to Ireland was supported by the promoters of that Bill up to the last day of the Parliamentary session, when the exigencies of business necessitated the limitation of the Bill to England.

(b) That the extension of the same system to Ireland has been approved by seventy-eight boards of guardians out of 103 who have expressed their opinions, and there is reason to believe that many other boards are in favour of the proposal.

(c) That a large majority of the Poor-law medical officers who gave utterance to their opinion were willing to accept this settlement of the question.

(d.) That the Irish Poor-Law (non-medical) Officers' Association concurs in desiring the passing of the same bill.

(e.) That, while the extension of the English system was advocated in Parliament by several Irish members, no serious opposition was raised by any section of Irish representatives, and the Bill, as proposed to extend to Ireland, passed all its stages, until the third reading, with the tacit consent of all Irish parties.

The Council, therefore, most respectfully urges you to afford for such a measure the opportunity for discussion in next session of Parliament, which it can only obtain through your influence, and towards the passing of such a measure the Council most respectfully offers all assistance within its power.

Signed (for the Irish Medical Association),
AUSTIN MELDON, F.R.C.S., President.
THOMAS DONNELLY, M.D., M.A., F.R.C.S., Chairman of Council.
WILLIAM JOSEPH HEPBURN, M.R.C.P.I., Secretary of Council.
J. P. GARLAND, F.R.C.P.I., Secretary of the Association.
Nov. 17th, 1896.

CORNWALL AS A WINTER RESORT.—The Great Western Railway Company have issued a revised edition of a pamphlet upon "Cornwall as a Winter Resort," in which the claims of West Cornwall, and of Falmouth in particular, as a residence during the winter are contrasted in favourable comparison with the south of France and the Riviera. The equability and mildness of the climate are illustrated by the numbers of exotic and sub-tropical plants which thrive and flower in the open air throughout the winter.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE annual meeting of the Fellows and Members of the College was held in the Lecture Theatre of the College on Nov. 19th. The chair was taken by Mr. C. N. MACNAMARA, the senior Vice-President, in the absence of the President, Sir William Mac Cormac. Forty-one Fellows, including sixteen members of the Council and sixty-six Members, were present.

The CHAIRMAN placed before the meeting the report of the Council for the year ending July 9th, 1896, and said he felt sure that everyone regretted the absence of Sir William Mac Cormac, and that he hoped that better accounts would soon be received of his condition. He called the attention of the Fellows and Members present to the improvements which had recently been made in the theatre, which, however, was not finished on account of a strike among the workmen. Anyone reading the report would see how much the Council had to concern itself with examinations, and by fixing the curriculum and the examinations it had always had great influence on medical education. In the early part of the second half of this century, in order to obtain the Membership diploma, it was only necessary to pass in anatomy, physiology, and surgery, and the examination, which lasted about an hour and a half, was entirely *viva voce*. The Council found it necessary gradually to extend the scope of the examination, and now no student can obtain the diploma of the College who has not a very good general knowledge of his profession. During the last twelve months upwards of 3000 candidates had presented themselves for examination; of course, in some cases the candidate had come up for examination twice and some were candidates who had failed previously, but the figures quoted showed with what a large number of candidates the Council had to deal. During the past year the Council had eliminated one examination and the curriculum had been modified. The other departments of the College had been well kept up, the library had had nearly 10,000 readers, and the museum and the laboratories had been fully maintained. The finances had been presented in a simplified form, so that anyone could understand them. The present position of the College appeared prosperous, but the falling value of investments rendered the future anxious. The Council would be very glad to receive the opinions of the Fellows and Members, and had acted in pursuance of resolutions carried at these meetings; for instance, on the question of the desirability of the admission of women to the examinations of the College, after the meeting of Fellows and Members had voted against it the Council had decided to do nothing in the matter; and again, when the meeting had resolved that the Members of the College should be represented on the Council it had been decided to take a poll of the Fellows.

Sir ROBERT CRAVEN remarked that he thought it would be well if the report were sent to all the Members as well as the Fellows.

Some other speakers concurred in the suggestion, and the Chairman said that any who wished it could obtain a copy of the report on application, but to send a copy to each of the 10,000 Members would be a matter of great expense.

Mr. JOSEPH SMITH wished to move a vote of thanks to the Earl of Stamford for his exertions in the matter of the Civil Rights Defence Committee, but the CHAIRMAN decided that as no notice had been given of the resolution it was out of order.

Mr. TIMOTHY HOLMES moved:—

"That this meeting trusts that the Council may see fit to contribute a substantial sum from the funds of the College towards the defence of the rights of Mr. R. B. Anderson, these being the common rights of the Fellows and Members which the College, under By-law XV., has undertaken to defend."

He requested the Secretary to read By-law XV., which was as follows: "The Council will at all times protect and defend every Fellow and Member of the College who may be disturbed in the exercise and enjoyment of the rights, privileges, exemptions, and immunities acquired by him as a Fellow and Member or Member thereof."

Mr. HOLMES, continuing, said he felt that warm thanks were due to the Council for the way in which they had

carried out the by-law which had just been read by nominating two of their number as members of the Civil Rights Defence Committee. The question which now had to be decided was, How should Mr. Anderson obtain restitution of the rights of which he had been unjustly deprived? Mr. Anderson's case was so well known that it was hardly necessary to go into any details, but he might mention that the judges of Tobago had illegally promoted actions against Mr. Anderson and had ruined his practice. In the Court of Queen's Bench he had brought an action against the judges; the jury had decided that the judges had acted illegally and had awarded £500 damages; but the judge (the late Lord Coleridge) had entered a verdict for the defendants on the ground that a judge could not be liable for anything he did when acting in his judicial capacity. This judgment was upheld in the Court of Appeal. Mr. Anderson now had to go to the House of Lords; the costs would amount to about £1000. As to the facts there could be no doubt; a commission had been sent out to inquire into the matter, and as a consequence the judges had been at once removed and their pensions forfeited. The question now was how to get the money? He thought that they might reasonably ask the Council for funds, as this was a case where the rights of a Fellow of the College had been illegally interfered with.

Dr. THOMAS MORTON seconded the resolution, saying that the Council could not expect to find a precedent and need not fear to create one. The case was a most important one to all in general practice, as in Mr. Anderson's case it had been decided in court that when a medical man has once undertaken the care of a case he is under no circumstances at liberty to withdraw from the case. He hoped the Council would accede to the request contained in the resolution, and he was sure they would meet with no opposition in this matter from Fellows and Members.

Mr. RIVINGTON said that he felt called upon to speak as he was one of the representatives of the College on the Civil Rights Defence Committee. He felt much sympathy with Mr. Anderson, and when he consented to become a member of the committee he determined to attend as many of the meetings as he could. He had been present at very many of these meetings, and, moreover, had spoken on many occasions in its favour at meetings held in various parts of London. Of course, as a member of the Council he could express no opinion as to what decision might be arrived at by the Council. He would, however, make two remarks. One was that this was not a case of mere individual hardship or one which could be satisfactorily dealt with by any of the voluntary medical defence associations. It was one which concerned the fundamental rights of all professional men. Section 6 of the Act of 1886 secured the right of practising according to the ethics of the profession to all registered medical men, both in England and the colonies, but the decisions in Mr. Anderson's case negatived this right. The fight could only be won by Mr. Anderson being backed up by public bodies. He considered that £2000 would be required. Mr. Holmes had only mentioned the appeal to the House of Lords; that would take £1000. There was also an appeal pending to the Privy Council to set aside the judgments against Mr. Anderson which had been made in Tobago; this would take another £1000. It was impossible for Mr. Anderson to go back and practice in Tobago, for if he did so he would be made bankrupt and lose an estate he had there. He did not think that Mr. Anderson would win his case unless the Council of the College of Surgeons headed the list with a subscription of, say, £500; then other public bodies would follow the example. As to whether the Council should accede to this request, he would express no opinion.

Mr. HENRY MORRIS admitted that Mr. Anderson's case was one of extreme hardship, but maintained that the question ought to be decided by the legality of the course suggested. The by-law which had been quoted said that the College would defend the rights which were acquired on becoming a Fellow or Member of this College. The rights which Mr. Anderson claimed had been infringed were those which belonged to him as a man and an Englishman. Mr. Anderson claimed that the decisions of the judges in the courts were contrary to law, but they had been upheld in the Court of Appeal, and therefore it could not be said that they were contrary to the law. A Member of the College could not reasonably ask to be assisted in a dispute with parochial authorities, but if the principle were acted on in the one case it should certainly be acted on in the other. He would remind Mr. Holmes that he must often have heard the charge to successful candidates for the Membership that their right to practice was liable to be controlled by colonial legislation. Personally he felt the deepest sympathy for Mr. Anderson, but they must not let that feeling interfere with the financial prosperity of the College.

Mr. JOSEPH SMITH considered Mr. Morris's speech to be quite beside the question.

Mr. R. B. ANDERSON claimed that by becoming Fellow and Member he had acquired the right to practice throughout the British Empire except in so far as controlled by colonial legislation. He had complied with the laws of Trinidad, which required him to pay 5*s.* for registration. His right to practise in Tobago had been illegally interfered with, a judgment had been delivered against him in Trinidad, and it could be enforced at once if he returned. He had no doubt the justice of a claim under the by-law to the support of the College, but he did not now come to make a formal application under the by-law. The Civil Rights Defence Committee were fully prepared to uphold all his rights, and he had no doubt of success if he could obtain the funds required.

Surgeon-Major INCE said that such an application for the use of the College funds was most unprecedented. The College had but little funds remaining, and if such a use as that suggested were to be made of them the College would soon be in a state of bankruptcy. An important question was how far Mr. Anderson himself had been in fault in this matter; but even if Mr. Anderson were the most persecuted man in the earth that was no reason for imperilling the finances of the College.

Mr. HOWARD MARSH said he was anxious that the attitude of the Council should not be misunderstood. Mr. Anderson's case had excited the greatest sympathy in the Council, but it was difficult to come to any other conclusion than that it would be illegal for the Council to employ any of the College funds on such an object. It seemed to be thought that the College had many superfluous funds, but that was not the case. The Council considered it wise to attempt to save £2000 a year, but when they had spent what was necessary on the library, museum, and laboratories they found they were unable to save the amount they wished. The Council claimed that the College was a scientific body, and were attempting on that plea to get exemption from corporation duty, amounting to £400 a year; but if they were to subscribe as the resolution requested it would greatly injure their prospect of success in obtaining remission of duty, as it would be said that the College existed for professional and not for scientific purposes. He suggested that a much more satisfactory way would be to make a general appeal to the whole body of the profession.

Dr. WARD COUSINS said that he had acted on the Civil Rights Defence Committee. He would like to accentuate what Mr. Marsh had said. He would suggest that the College should through its representative bring pressure to bear on the General Medical Council, and if this were done by the other bodies having representatives there he thought the matter would be much advanced.

Mr. T. BRYANT asked if it were true that Mr. Anderson might practise freely anywhere else than Tobago?

Mr. ANDERSON said that while the present decisions were in force it could not be claimed that any medical man anywhere could be absolutely certain of being able to practise his profession.

Mr. JOHN TWEEDY asked if Mr. Anderson were to go back now to Tobago could he act as a merchant or did the decision prevent him acting in any capacity?

Mr. ANDERSON said that even if he did not practise as a medical man it would be necessary for him to go through the Bankruptcy Court.

Mr. MORRIS asked if Mr. Anderson would be able to practise at Tobago if he paid twenty shillings in the pound.

Mr. ANDERSON said he could not approve of any such settlement of the matter, for it would amount to a confession that he had wilfully neglected a patient.

The CHAIRMAN earnestly asked the meeting before voting to consider the position of the College. The College had started an action, and any resolution such as that before the meeting would if passed certainly hamper them in their action, for it would be an acknowledgement that the College was not a purely scientific institution.

Mr. W. G. DICKINSON asked if the £300 recorded in the report as having been spent on a conversazione had been devoted to a scientific purpose.

Mr. JOSEPH SMITH said he hoped the meeting would unanimously support the resolution.

When the resolution was put to the meeting 47 voted in favour of it and 2 against.

Mr. JOSEPH SMITH moved :—

"That this meeting, while thanking the Council for taking a poll of the Fellows on the question of the representation of Members, dissents from, and regrets the resolution passed by, the Council on March 12th, 1896."

He said he regretted that the Council had in the resolution mentioned expressed the opinion that further representation of the Members on the Council was not desirable, for he had thought that the Council had recognised that it was no use fighting the Members. He was sorry to see that a junior member of the Council had stirred up the Fellows in Manchester against the Members.

Dr. ALDERSON seconded the resolution, and pointed out that the members of the Council were utterly ignorant of the wants of the Members. He drew attention to Mr. Hutchinson's letter, in which it was pointed out that if a *de novo* scheme of government were to be devised for such a body as the College, could it be doubted that the Members would be represented as well as the Fellows?

The resolution was carried.

Mr. W. G. DICKINSON moved :—

"That the Council be requested to instruct the representative of the College on the General Medical Council to forward in every way which seems feasible the promotion of the principle: 'That every representative of a Licensing Body should effectively represent the interests of its Graduates, Fellows, Members, or Licentiates.'"

He remarked that the principle contained in this resolution was not new—in fact, there was good reason to believe that it was as old as the Act of 1858, which stated that the General Medical Council was to consist of "one representative of each of the following bodies," and it was undoubtedly the intention of the Legislature that there should be genuine representation of the individual practitioners attached to these bodies. As matters stood at present the "representative" represented the Council of the College and not the College. If this College were to make its representative a real representative of all the Fellows and Members of the College the example would be followed by the other medical corporations and there would be no need for "direct representation." He considered that the College at present had an able representative, but he could not be said to represent the views of general practitioners, or he would never have suggested, as he did in 1894, that the two Royal Colleges should issue diplomas to midwives. He hoped that they would in a few weeks be more directly represented by another member of the Council.

Dr. HERBERT SNOW, in seconding, said that justice was always obtained in the end, however much opposition it might meet with. They were on the eve of a medical election which had excited more interest than any preceding.

Mr. GEORGE BROWN supported the resolution.

Mr. JOSEPH SMITH said that the Members of the General Medical Council did not represent the Members of the Colleges and corporations which elected them. If the elections had been in the hands of the Members of the College the present representative, Mr. Bryant, though a most illustrious surgeon, would never have been appointed.

Mr. T. HOLMES, speaking on the question of the pending action at law by the Council, advised the Council to withdraw the case and to say that the College would do what was best for its Fellows and Members, whether in a scientific or a professional matter. This would be worth much more than £400 a year.

The resolution was carried *nem. con.*

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6539 births and 4435 deaths were registered during the week ending Nov. 21st. The annual rate of mortality in these towns, which had increased in the five preceding weeks from 16·3 to 20·8 per 1000, further rose last week to 21·3. The lowest rates in these towns were 13·1 in Leicester, 16·1 in Huddersfield, 16·3 in Croydon, and 17·4 in Derby; the highest rates were 26·3 in Cardiff, 28·6 in Manchester, 29·2 in Liverpool, and 33·4 in Preston. The 4435 deaths included 363 which were referred to the principal zymotic diseases, against 366 and 386 in the two preceding weeks; of these, 90 resulted from diphtheria, 71 from measles, 56 from "fever" (principally enteric), 56 from whooping-cough, 51 from scarlet fever, 39 from diarrhœa, and not one from small-pox. No death from any of these diseases was recorded last week in Norwich; in the other towns they caused the lowest death rates in Croydon, Brighton, Huddersfield, and Halifax, and the highest rates in Gateshead, Birmingham, Plymouth, Hull, and West Ham. The greatest mortality from measles occurred in Derby, Hull, Gateshead, Bradford, and Plymouth; from scarlet fever in West Ham; and from whooping-cough in Birkenhead and Swansea. The mortality from "fever" showed no marked excess in any of the large towns. The 90 deaths from diphtheria included 59 in London, 8 in Birmingham, 4 in West Ham, and 4 in Cardiff. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns. There was only 1 case of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 21st inst., against 2 at the end of each of the three preceding weeks; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 4092, against numbers declining from 4164 to 4134 on the four preceding Saturdays; 398 new cases were admitted during the week, against 367, 384, and 362 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 118 to 492 in the ten preceding weeks, declined again to 472 last week, but were 42 above the corrected average. The causes of 72, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Birkenhead, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 18·6 to 23·5 per 1000, declined again to 21·1 during the week ending Nov. 21st, and was slightly below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·4 in Leith and 16·8 in Greenock to 23·5 in Glasgow and 29·1 in Perth. The 615 deaths in these towns included 37 which were referred to measles, 17 to diarrhœa, 7 to scarlet fever, 7 to whooping-cough, 4 to diphtheria, and 4 to "fever." In all, 76 deaths resulted from these principal zymotic diseases, against 59 and 75 in the two preceding weeks. These 76 deaths were equal to an annual rate of 2·6 per 1000, which was 0·9 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 23 and 17 in the two preceding weeks, rose again to 37 last week, of which 33 occurred in Glasgow and 2 in Paisley. The 7 deaths referred to whooping-cough showed a decline of 5 from the number in the preceding week, and included 4 in Edinburgh and 2 in Glasgow. The fatal cases of scarlet fever, which had increased from 3 to 11 in the three preceding weeks, declined again to 7 last week, of which 3 occurred in Edinburgh and 2 in Glasgow. The 4 deaths referred to different forms of "fever" (principally enteric) showed a decline of 6 from the number in the preceding week, and included 3 in Glasgow. The fatal cases of diphtheria, which had been 3 and 8 in the two preceding weeks, declined to 4 last week. The deaths from diseases of the respiratory organs in these towns, which had been 168 and 179 in the two preceding weeks, declined to 172 last week, but were 49 above the number in the corresponding period of last year. The causes of 29, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 23·7 to 28·3 per 1000 in the three preceding weeks, further rose to 29·5 during the week ending Nov. 21st. During the past eight weeks of the current quarter the death-rate in the city has averaged 25·2 per 1000, the rate during

the same period being 18·0 in London and 17·1 in Edinburgh. The 198 deaths in Dublin during the week under notice showed an increase of 8 upon the number in the preceding week, and included 16 which were referred to the principal zymotic diseases, against 17 and 13 in the two preceding weeks; of these, 7 resulted from scarlet fever, 3 from whooping-cough, 3 from "fever," and 3 from diarrhœa, but not one from small-pox, measles, or diphtheria. These 16 deaths were equal to an annual rate of 2·4 per 1000, the zymotic death-rate during the same period being 1·7 in London and 1·9 in Edinburgh. The fatal cases of scarlet fever, which had been 5 in each of the two preceding weeks, rose to 7 last week. The deaths referred to different forms of "fever," which had been 7 and 2 in the two preceding weeks, rose again to 3 last week. The 3 fatal cases of whooping-cough were within one of the number recorded in the preceding week. The 198 deaths in Dublin last week included 25 of infants under one year of age, and 51 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers recorded in the preceding week. Seven inquest cases and 7 deaths from violence were registered; and 68, or more than a third, of the deaths occurred in public institutions. The causes of 13, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

Army Medical Staff.

Surgeon-Major H. R. Whitehead, F.R.C.S., lately Assistant Professor of Surgery in the Army Medical School, has embarked for service in India. Surgeon-Major Sloggett and Surgeon-Major Lane have arrived from India. Surgeon-Major J. Harran will shortly embark for Bombay, and Surgeon-Captain C. C. Reilly will proceed to Malta. Surgeon-Major B. W. Somerville-Large has proceeded to Newbridge for temporary duty during the absence on the sick list of Surgeon-Major R. C. K. Laffan. Surgeon-Captain J. H. E. Austin has been ordered to Woolwich for duty. Surgeon-Major R. H. Clement has been posted to the Medical Charge of the Station Hospital, Sheerness. Surgeon-Major-General C. Herve Giraud retires from the service on the 30th inst. Surgeon-Major A. V. Lane, A.M.S., has reported himself at Netley for duty.

India and the Indian Medical Services.

Surgeon-Major Hendley (Bengal), Civil Surgeon, Dharmsala, to be Joint Medical Officer of Simla, in succession to Surgeon-Major J. Moorhead, whose services are replaced at the disposal of the Government of Bengal. Surgeon-Captain Armstrong (Madras), Officiating Residency Surgeon, Nepal, is appointed to be Medical Officer of the Erinpura Irregular Force, vice Surgeon-Major Neilson, appointed Civil Surgeon of Bikanir. Surgeon-Lieutenant Grant is appointed to officiate as Surgeon Naturalist, Marine Survey of India, vice Surgeon-Captain Anderson, whose services have been placed temporarily at the disposal of the Revenue and Agricultural Department for appointment as Officiating Superintendent of the Indian Museum, Calcutta.

Naval Medical Service.

The following appointments are notified:—Fleet-Surgeon V. Duke to the *Thunderer*, additional for Pembroke Dock for temporary service. Staff-Surgeon Michael J. M'Carthy to the *Endymion;* Surgeons: Henry B. Hall, M.B., to the *Imogene;* G. A. S. Bell to the *Vulcan* when re-commissioned; W. G. Peck to the *Anson;* and C. J. Mansfield to the *Endymion*.

Army Medical Reserve of Officers.

Surgeon-Lieutenant-Colonel C. C. Walter, having resigned his Militia appointment, ceases to belong to the Army Medical Reserve of Officers. Surgeon-Lieutenant William A. Wetwan, 2nd Volunteer Battalion, the East Yorkshire Regiment, to be Surgeon-Captain. The under-mentioned officers to be Surgeon-Lieutenants: Surgeon-Lieutenant Robert T. Ferguson, M.B., 6th Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Lieutenant Charles G. Maclagan, M.B., 1st Volunteer Battalion the Northumberland Fusiliers; and Surgeon-Lieutenant John M. Moir, M.D., the Highland Volunteer Artillery (Southern Division, Royal Artillery).

Volunteer Corps.

Artillery: 1st Cumberland: Surgeon-Lieutenant James Brown Bird is appointed Second Lieutenant. *Royal Engineers:* 1st Abedeenshire: Albert Henderson, M.B., to be Surgeon-Lieutenant (dated Nov. 25th, 1896). 2nd Gloucestershire (the Bristol): Surgeon-Lieutenant-Colonel J. Knill resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Corps on his retirement. *Rifle:* 2nd Volunteer Battalion the East Lancashire Regiment: Robert Craig Rogers, gent., to be Surgeon-Lieutenant. 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): William Thomas Crawford, M.D., to be Surgeon-Lieutenant.

Volunteer Medical Staff Corps.

The London Companies: Surgeon-Lieutenant H. J. Waring, M.B., resigns his commission.

Deaths in the Services.

Surgeon-Major-General Edward Cardigan Markey, C.B., at Southsea, on Thursday, Nov. 19th. He entered the army as assistant surgeon in 1859, became surgeon in 1873, surgeon-major in 1874, brigade-surgeon in 1885, surgeon-colonel in 1890, and surgeon-major-general in 1895. He served in the Afghan War of 1879–80, and was present in the engagement at Saif-u-deen, in the advance to Khelat-i-Ghilzie, and also in the engagement at Ahmed Kheyl. He accompanied Sir Frederick Roberts in the march to Candahar, and was present at the action at that place (medal with two clasps and bronze decoration). He also served with the Murri expedition and with the Nile expedition in 1884–85. He was principal medical officer at El Gubat, and was present at the skirmishes during the retreat to Korti. He was awarded the medal and clasp and Khedive's star. He next took part in the Chin Lushai expedition of 1889–90 as principal medical officer, and received the thanks of the Government of India for his services. He was also made a Companion of the Bath, and was given the medal and clasp. He had been principal medical officer at Portsmouth for about eighteen months, after having been stationed at Madras.

Surgeon-Major F. Foaker (retired), on the 12th inst., in his eighty-sixth year, who joined the Army Medical Service in 1838, was appointed surgeon in 1847, surgeon-major in 1855, took part in the Crimean campaign of 1854–55, including Alma, Inkerman, Sebastopol, and the Kinburn expedition. Medal with three clasps and Turkish medal.

Surgeon-Captain Hugh Robert Campbell Barber, I.M.S., Civil Surgeon, Murree, at that Station from enteric fever. He joined the army in 1891.

Correspondence.

"Audi alteram partem."

THE LORD MAYOR'S PROPOSAL AND THE HOSPITALS.

To the Editors of THE LANCET.

Sirs,—A good deal has been said lately about the proposal of the Lord Mayor to raise £1,000,000 next year as a jubilee recognition of Her Majesty's long and glorious reign to pay off the existing debt of the hospitals. This is a grand idea, but I fear it would not be productive of the much-hoped-for result. Would it not be better to effect this much-desired blessing for the Government to consent to an extra 1*d.* levied on the income tax (which would produce about £1,900,000 a year), and so keep up all the hospitals of the United Kingdom at so much per bed each hospital provides? Those that possess invested property should receive so much less per bed, according to the annual receipts of such property. Should this be entertained by the Government all hospitals must be *absolutely free*, no letter of recommendation necessary, and only the fact that there is no vacant bed should cause a patient to be refused admission. To superintend the expenditure of such Government help I suggest that there should be a Royal commissioner for each county (where hospitals exist), and that two governors of each hospital in a county should be appointed as a finance committee to help such commissioner in his duties of supervision. I have had some experience of

hospital management, and, considering the enormous benefit these institutions are to the public, particularly to the very poor, it is sad to see how very inadequately they are supported by those who can well afford to subscribe. One hospital with which I am now intimately acquainted requires £6000 a year to keep it up, and all we have to depend upon, in addition to Hospital Sunday and Saturday Funds (which averages about £700 a year), is £1600 a year, thus making an income of £2300 a year, leaving £3700 to be obtained by persistent solicitation. Should this plan be agreed to I am, of course, aware that we should lose a large proportion of our annual subscriptions, but this is inevitable. Hoping that you will find room for this in your valuable paper, I am, Sirs, your obedient servant,

F. GORDON WATSON (Colonel),
Member House Committee, Samaritan Free Hospital, Marylebone road, N.W.

Bryanston-square, W., Nov. 23rd, 1896.

"STRABOTOMY IN THE GOOD OLD TIMES."[1]

To the Editors of THE LANCET.

SIRS,—I quite foresaw that the muscular advancement I recommend for the operative treatment of strabismus would meet, as all progress must, with much opposition. It is for this reason that I was not satisfied with stating the scientific justification of this method, but bided my time until I was able to meet adverse theories with experience and facts that do not admit of dispute or denial.

In my publications my *confrère* Dr. C. Bell Taylor will find the refutation, in advance, of the objections he adduces in THE LANCET.[2] I find even in his own article the strongest evidence in support of what I recently said[3] in reference to the imperfect and erroneous ideas still entertained in regard to strabismus and strabotomy.

One objection, truly, which will long bring comfort to the heart of our opponents is less easy to refute—namely, that muscular advancement is a more complicated operation than tenotomy. The same objection was made in the old days by the supporters of couching for cataract to those who practised extraction. It has, however, in no way prevented the final triumph of the complicated over the simple method.

The argument of our opponents that advancement does not succeed in their hands cannot appeal to us, to whom it gives excellent results. The same answer may be given to those who declare the re-establishment of binocular vision impossible. *They* fail to obtain it; so much the worse for them.

I have so often stated (especially in the *Archives d'Ophtalmologie*) the reasons for a more rational and effective treatment for strabismus that it seems to me hardly necessary to repeat them here. Nor shall I take too much to heart the lesson which my colleague has devoted to me before the Nottingham Medico-Chirurgical Society. I would rather cordially wish him more success in his attempts to advance or even to tenotomise the external rectus muscle, an operation which he considers as "comparatively difficult from the far back insertion of this muscle and its diffuse attachment to the globe." Let us laugh with him over his good story of the patient he met in the street "a few nights ago about half-past nine," and tenotomised, without previous examination, without special post-operative treatment. Let us hope, above all, that his patients may be always able to share in the merriment roused by this way of operating!

I am, Sirs, yours faithfully,

Paris, Nov. 23rd, 1896. EDMUND LANDOLT, M.D.

"ELECTION OF DIRECT REPRESENTATIVES TO THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—On Nov. 9th I addressed the following letter to each of the ten candidates now before the profession:—

"DEAR SIR,—You may be interested to know that in this parish, of which I am district medical officer, there has been a 'certificated' midwife for some four years, ostensibly brought here by a committee of ladies to attend on the 'poor' and to oppose the 'Gamps.' It turns out, however, that she has failed to oust the latter from their attendance on the 'poor' and finds her practice among the wives of the better working class, small shopkeepers, and even those of a superior social grade, who can have her services for a fortnight for 7*s.* 6*d.*, the money being paid to the committee who employ and pay her a salary of £80 per annum. A the members of the committee are mostly Church workers an active canvass is conducted in her behalf. I was asked to 'follow' her in case of emergency, but declined emphatically to the secretary, who is a lady of good social position and the wife of a retired Q.C. Another medical man in the place consented to do so at once, and since then I have been boycotted both socially and professionally, and my midwifery practice is virtually *nil*. The very poor prefer the 'Gamps' and 'neighbours,' who only charge 5*s.* and 'do a turn' for the mothers in the way of cooking and washing and dressing the baby, all this menial work being beneath the professional midwife, who 'comes and goes like a doctor.' I understand the 'certificated' midwife is spreading, especially in the metropolitan area, and if nothing is done to control her man-midwifery is doomed. The professional nurse, with her thermometer and her tongue, is bad enough, but the 'certificated midwife' is an outrage on the general practitioner. I am at a loss to know for whom to vote, and shall be glad to hear how you propose to regulate this army of unqualified midwifery practitioners who already hold the field. The Jubilee midwifery nurses (I am not sure of the name they bear) carry forceps in their bag. Make what use you like of this letter, and believe me, yours faithfully. ALEXANDER MCCOOK WEIR, M.D.

"P.S.—Copy of letter and reply will be sent to THE LANCET."

The replies of Mr. Rivington, Dr. Dolan, and Mr. Brown are not yet to hand; the other seven candidates deal more or less fully with the question put to them. Dr. Rentoul, Dr. Alderson, Mr. Jackson, and Dr. Drage are against control by registration, and Dr. Glover, Dr. Woodcock, and Dr. Diver are in favour of it. An extract or two will suffice to prove this. Dr. Glover is "not aware that in other districts the certificated midwife deprives medical men of cases they care to attend," and "one great advantage of registration would be the regulation of the midwife or midwifery nurse, the use of forceps, the certification of stillbirths, and the assumption of other medical functions would doubtless render her liable to removal from the list. ..... In any legislation I should look carefully (and I am sure I may say as much for Dr. Woodcock and Dr. Drage) to the interests of the profession as well as to the protection of women now exposed to terrible risks."

Dr. Woodcock enters very fully into the question and says: "Our Bill aims at imposing nursing duties upon a woman who is called a nurse, limits her functions, clearly defines the conditions under which she *must* call in skilled medical aid, penalises deviations from, or actions beyond, the prescribed duties of a midwifery nurse, and makes it impossible for her to employ unregistered assistants. She is to be controlled by a medical board and must, of course, be *registered*. How is she to be controlled otherwise? I stand by this Bill of the British Medical Association."

Dr. Diver disposes of the question thus: "I can but give this one answer, viz., that you cannot 'regulate an army of unqualified midwifery practitioners' of the kind you not unnaturally complain of until they come under your jurisdiction. The powers of the Medical Council, it seems to me, do not cover this huge body of women of various degrees of capacity and respectability."

Dr. Lovell Drage writes very explicitly and says: "I am very much obliged to you for your letter, for it adds another piece of evidence to my case against the proposed legislation for establishing a State recognised class of midwives;" and further, "there is not the slightest doubt in my mind that if any legislation is carried out upon the lines of the last Bill introduced into the Legislature the poorer members of the community will sooner or later be compelled to choose between a midwife and what you call a 'Gamp,' instead of between a 'Gamp' and a doctor."

Dr. Rentoul concludes a long letter thus: "1. That the existing midwives cannot be interfered with as we *practitioners* have established them. 2. That no more midwives shall be created. 3 That the Medical Council strike the name of any practitioner off the Register who grants any instrument to unregistered persons which proposes to empower its holder to act as a midwife, bone-setter, medical herbalist, or in any way practice any part or branch of physic. 4 That the present means of supplying poorer women and wives of the working-classes with registered practitioners is now more than amply sufficient through (1) the Poor-law medical service; (2) voluntary medical charities; (3) maternity clubs and dispensaries; and (4) medical practitioners who accept obstetric fees varying from 4*s.* to 15*s.*"

Mr. Jackson "deplores the condition of things disclosed in my letter" and says: "The matter is one which both Mr. G. Brown, Dr. Rentoul, and myself will endeavour to combat to the utmost of our abilities. ..... I think also it is open to question whether any practitioner who 'follows,' as you express it, or 'covers,' as it is sometimes termed, an

[1] In answer to Dr. C. Bell Taylor's clinical lecture on "Squint up to date": THE LANCET, Sept. 12th, 1896, p. 735.
[2] THE LANCET, Sept. 12th, 1896, p. 734–735.
[3] Meeting of the British Medical Association at Carlisle, 1896.

unqualified practitioner as a midwife who acts as you state is not guilty of conduct infamous in a professional sense. I do not see myself what difference there is in this and in covering an unqualified practitioner. ..... I think if the ægis of registration is thrown over them (midwives and mother Gamps included) matters would be still worse than they are."

Dr. Alderson "sympathises" with me and confirms, from his personal experience, the destruction of midwifery practice in his district—viz., a falling off from 125 to 20 per annum—through the midwives. He does not advocate the legal regulation of the present army of unqualified midwifery practitioners, but that every woman should engage a medical man at, if necessary, a reduced fee of 15*s*., with obstetric or monthly nurses, even if it cost the country £100,000 per annum; but he thinks the Poor-law medical officers with parish midwives under their supervision would meet the case of the very poor, and that the artizan class who have nine months in which to save the reduced fee, and whose wages are good, require no assistance. Dr. Alderson's views require careful digestion and I have done my best to express them in this condensed form, quotation being impossible

Mr. George Brown says: "The state of things you describe is becoming very common and unless something is done shortly general practitioners may as well seek employment in some other calling. I should try to enforce the law against the practice of midwifery by all unqualified persons, male or female. According to my reading of the Medical Act of 1886, no one is entitled to practise any branch of medicine unless registered or fully qualified in medicine, surgery, and obstetrics. The doctors who 'follow' midwives should be dealt with very severely."

Mr. Rivington replying to my query says: "I do not propose to regulate unqualified midwifery practice at all, but to promote measures for curtailing it and substituting fully qualified practice in its stead."

As my primary object was to know how to "vote" it would be unfair to your readers to suppress my own views; these are expressed in the following reply to Dr. Woodcock:—

"DEAR SIR,—I must thank you for the trouble you have taken to reply in detail to my letter, a copy of which I sent to each candidate. I think one of the candidates has inserted it in the *Scalpel*, a journal of which I know nothing. I see you are strongly in favour of 'Control through Registration.' I may say at once that it is the ambition of every ladies' committee in the land to have their midwives registered. This is in itself suspicious. The purpose of registration from their point of view (I have debated it with them) is to confer upon midwives a position independent of doctors. What these ladies resent is medical control in any shape or form. I point this out for your careful consideration. When asked to 'follow' the local midwife and I declined on the ground of 'covering' an unqualified practitioner the lady secretary promptly replied: 'Don't say unqualified, say unregistered.' 'They will never be registered,' I replied. 'They *will*,' re-echoed the irate dame. Be careful, therefore, how you act, as unwittingly you may find yourself fighting for the enemy. It appears to me that the profession is equal to the control of all existing midwives (1) through the Poor-law, and (2) through local combinations of medical men. Your 'certificated' midwife is beyond the 'poor' (*vide* my letter). What *they* want is a handy woman as nurse (obstetric nurse) acting under the district medical officer in every case, and the existing law is equal to this. The better class obstetric nurse (midwife is invidious) should follow private practitioners—should be made to follow them—and their number and pay regulated by mixed local committees if you like. Registration on the merits will be disastrous to the public and the profession; for who can unravel the secrets of the midwifery bag, and who control the independent midwife in the lying-in room? It is impossible. I have it from a nurse-midwife herself that the bag does contain forceps, and will an Act of Parliament prevent their application? As far as I can judge at present of the ten candidates in the field six are against and four for registration by Act of Parliament. I am convinced (from my experience here) that registration such as you and Dr. Glover advocate will abolish man-midwifery. Is this your purpose?"

I am, Sirs, yours faithfully,

Nov. 18th, 1898. ALEX. MCCOOK WEIR.

P.S.—There are only a few verbal alterations in the above letter to Dr. Woodcock, and Dr. Glover's name is now added, much to my regret.

*** The following is Dr. Woodcock's complete reply to Dr. McCook Weir.—ED. L.

"Old Trafford, Manchester, Nov. 10th, 1898.

"DEAR SIR,—You address me I presume because I am a candidate for election to the General Medical Council and you are wisbful to elicit an expression of my views upon the midwives question. Your letter well illustrates the mischief that may be done under existing conditions, when, as you say; 'a professional midwife comes and goes like a doctor.' It appeared to me that the legislation attempted by the Bill introduced into the House of Lords by Lord Balfour, however well intended, rather aggravated than improved matters, and I opposed it. But it was evident that opposition was not enough. The risks to poor lying-in women had been so clearly recognised that a measure of protection must be afforded them, and it became with me a serious question, How is this to be accomplished?

"I was a member of a sub-committee of the Parliamentary Bills Committee of the British Medical Association asked to deal with the question, and I assisted in drafting a Midwifery Nurses Registration Bill. This was necessarily done hurriedly, more with a view to demonstrate to members of the Legislature that the attention of the profession had been seriously arrested by the question, and not, as had been alleged, that the rank and file of the profession were from sordid motives blindly and obstinately opposed to all legislation on the subject than with any hope that our first suggestions would be accepted. That draft Bill of ours was defective, but it served its purpose. It was then remitted to the branches of the British Medical Association and, at my instigation, a committee of the Lancashire and Cheshire Branch was appointed to consider and report upon it. I was chairman of that committee. We reported that the Parliamentary Bills Committee's Bill was faulty inasmuch as it permitted attendance without medical control and supervision, and did not make the after nursing compulsory. We fully considered the question of attendance on cases of midwifery by persons other than registered practitioners and came to the conclusion that it was not practicable for every woman to have a registered medical practitioner in actual attendance at her confinement, and that it would be futile to attempt legislation with that object. Our Bill aims at imposing nursing duties on a woman who is called a nurse, limits her functions, clearly defines the condition under which she must call in skilled medical aid, penalises deviations from or actions beyond the prescribed duties of a midwifery nurse, and makes it impossible for her to employ unregistered assistants. She is to be controlled by a medical board, and must, of course, be registered; now is she to be controlled otherwise?

I stand by this Bill. If this measure were passed the condition of affairs of which you complain at Mortlake cum East Sheen could not be. However highly trained and however strongly supported by social influence, a professional midwife or nurse would be unable to escape the penal consequences of transgressing clearly defined rules, among which is one against the employment of midwifery instruments. There is a good deal of cant being written upon the question in view of the election of direct representatives on the General Medical Council, and it is amusing to see such marvellous evidence of new-born zeal to protect the interests of poor general practitioners on the part of aspirants to the Council. The constituency is surely too intelligent to be caught by chaff, to indulge in impossible hopes, or to be menaced by threats of improbable dangers. There is no question of creating an inferior order of practitioners. They exist. They are uncontrolled and ungoverned. They practise with impunity. The public well-being and the interests of the profession are alike imperilled. All this is discreditable. The evils have been recognised. Laudable but misguided efforts to provide a remedy have been attempted. The time has, however, arrived for an effort on the part of those best acquainted with its difficulties to attempt a solution of the problem. I am not without hope that there is wisdom and energy and patriotism enough in the ranks of our profession to afford the legislation such assistance as will enable it to pass an Act of Parliament which in its operation shall sufficiently protect both the interests of the public and the medical profession. Too much must not be expected of the General Medical Council. It has given no evidence of either ability or willingness to do great things. A man need not, however, be a member of that august body to contribute to the advancement of much needed medical reforms. The position has its advantages to a man who is in earnest about these things and affords an opportunity for which one would be grateful, but the Council can only be a potent influence for good when it is a reflex of downright earnestness on the part of the profession in its determination to secure an amendment of the laws by which it is controlled and governed.

I am, dear Sir, yours faithfully,

SAM WOODCOCK.

To Alexander McCook Weir, Esq., M.D., &c., East Sheen.

To the Editors of THE LANCET.

SIRS,—A letter was addressed last Wednesday, signed by me, Mr. Rivington, Dr. Ward Cousins, and Professor Horsley, to all the Direct Representatives on the General Medical Council, asking them to take steps at its present session in concert with the representatives of the Colleges of Surgeons, England and Ireland, Faculty of Physicians and Surgeons Glasgow, and Apothecaries' Hall, London, who have been instructed to do what may seem feasible in support of the rights of the profession. A copy of this letter was sent to you, and I trust it may appear this week. We apply to our direct representatives on the broad principle that the rights of medical men are entrusted to the Council and guaranteed by it for the promotion of medical education and medical science. I enclose copies of the answers so far received, and I desire through your columns to invite the careful attention of your readers to the action of their direct representatives on this broad principle, which has so far been repudiated by the Council on the advice of its solicitor.

I am, Sirs, our obedient servant,

TIMOTHY HOLMES.

Civil Rights Defence Committee, 5, Mitre-court, Temple, E.C., Nov. 25th, 1898.

[COPY.]

"55, Temple-row, Birmingham, Nov. 20th, 1898.

"DEAR MR. HOLMES,—As regards the very important matter contained in your letter dated Nov. 6th, but only coming into my hands on Nov. 18th, I will confer with my direct representative colleagues on the General Medical Council. In a question of this kind it is, I think, very desirable that we should confer and, if possible, all act together.

"Yours very truly,

"T. Holmes, Esq. "WALTER FOSTER."

"54, St. Stephen's green East, Dublin, Nov. 23rd, 1898.

"DEAR SIR,—I have your letter and papers regarding Mr. Anderson's case. I can only say that my entire sympathy is with him and I shall

be glad if the General Medical Council can do anything to help his appeal for justice. There seems to be a doubt about the Council's power, but I shall support any movement that is possible. I go to London to-night. "Faithfully yours,

"To Timothy Holmes, Esq. "W. THOMSON."

To the Editors of THE LANCET.

SIRS,—I read with great satisfaction the letter of Dr. Rentoul in THE LANCET of last Saturday and consider the insertion of it a magnanimous act, and I venture to say that nothing could have shown the profession more clearly the openness of its columns to the contributions of those of all shades of opinion, and that persistence in such a course will supply a want which is, and will be, more appreciated day by day. Although I know Dr. Rentoul well, intimately to a certain degree, yet I "did not know half which the letter contains," but I cannot agree with the view expressed in the editorial comment appended to it, which is apt to give the impression that the midwives' question is a monomania or fad of his. Surely his letter has disproved conclusively any such view, and yet there is a phase of it which is as great a satisfaction to his friends—namely, that "he cannot get away from it"—as it is disagreeable to his opponents, that the midwives' question "cannot get away from him." I will not trespass further on your space.

I am, Sirs, yours truly,

G. H. BROADBENT.

Ardwick-green, Manchester, Nov. 24th, 1896.

BEATTY *v.* CULLINGWORTH.

To the Editors of THE LANCET.

SIRS,—I am sure that the whole of the profession will rejoice to know that the verdict of the jury in the above case was in favour of the defendant. I sincerely trust that a fund will be inaugurated for the payment of Dr. Cullingworth's costs out of pocket. To this end I shall be very pleased to contribute the sum of twenty guineas.

Believe me, very truly yours,

D. LLOYD ROBERTS.

St. John-street, Manchester, Nov. 23th, 1896.

AN ACOUSTIC BLADDER SOUND AND VAGINAL STETHOSCOPE.

To the Editors of THE LANCET.

SIRS,—The same idea occurred to me as has been carried out by Surgeon-Captain Richard Heard, but for the purpose I have adpated the phonendoscope. I found that instrument so useful in abdominal examinations that I first attached to it a modification of Hyde-Salter's globular stethoscope, an instrument I have long used for detecting early pregnancy. I found this combination so useful for detecting faint pelvic sounds that I further adapted a small sound screwed into the peg-hole of the moveable disc of the phonendoscope, which sound may be of steel or vulcanite, the latter, perhaps, giving the better results of the two.

I am, Sirs, yours truly,

Birmingham, Nov. 24th, 1896. LAWSON TAIT.

"THE ETIOLOGY OF ACUTE RHEUMATISM."

To the Editors of THE LANCET.

SIRS,—Your summary of Dr. McClymont's paper on the Etiology of Acute Rheumatism, read before the Hunterian Society on Nov. 11th,[1] contains one or two errors which, in the interest of historical accuracy, I trust you will allow me to correct. It is there stated: "Dr. Newsholme had shown that acute rheumatism was an urban disease and occurred more often in places situated in valleys; it occurred, also, when the mean soil temperature was raised. He had also shown that where the soil water was in excess acute rheumatism was very prevalent." The two last statements are mutually destructive, a high soil temperature being obviously inconsistent with an excess of soil water. THE LANCET of March 16th, 1895 (pp. 660–665), gives the real gist of the conclusions at which I had arrived, which are so opposed to all previous conceptions of the conditions of soil favourable to rheumatism. It is there shown that the great epidemics of rheumatic fever, wherever the necessary data could be ascertained, occurred in dry years—especially when there had been a succession of such dry years—and that they never occurred except when the subsoil water was abnormally low and the mean earth temperature for the year was exceptionally high. As to the two first statements quoted above there is, I think, sufficient evidence to show that rheumatic fever is an urban rather than a rural disease; but I know of none of a satisfactory character to show that it is specially prevalent in valleys. The immediate fatality (case-mortality) from rheumatic fever is so small and the place of ultimate death from the disease may be so remote from that of the locality in which the disease has been acquired that death returns have only a slight value in the solution of this problem. Some more certain indications may be gathered from Scandinavian countries, in which every case of rheumatic fever is notified to the public authorities. Until the same far-sighted policy is adopted in this country our knowledge of the natural history of rheumatic fever must remain incomplete, though I have been able to adduce sufficient evidence to demonstrate that it occurs in great epidemics and pandemics at irregular intervals of years, and that these epidemics occur only under the conditions of soil-temperature and deficiency of moisture already indicated.—I am, Sirs, yours obediently,

Brighton, Nov. 24th, 1896. ARTHUR NEWSHOLME, M.D. Lond.

[1] THE LANCET, Nov. 21st, 1896.

THE MEDICAL PROFESSION IN FRANCE: THE SAGE-FEMME.

To the Editors of THE LANCET.

SIRS,—If an object-lesson on the effect on the medical profession of the licensing of midwives and the extension of privileges to chemists is wanted in England it can be obtained by contemplating the profession abroad. The French medical profession has let go to sage-femme and chemist so many of its sources of income that it now of necessity appeals for the most part to a rougher and poorer class of men than in England. I have met several men who have qualified in France as both medical practitioner and chemist, but they always chose the better part and practised as chemists. If the English medical profession in a generous or careless spirit follows a foolish example and gives away its privileges, the smarter English youths will become dentists and chemists.—I am, Sirs, yours faithfully,

D. W. SAMWAYS, M.D. Lond., D.Sc. Camb., &c.

Menton, Riviera, Nov. 14th, 1896.

"THE USE OF CALF LYMPH BY PUBLIC VACCINATORS."

To the Editors of THE LANCET.

SIRS,—I regret that in your editorial note to my letter in THE LANCET of Nov. 21st you evade the chief point of it. Written warning as to the use of calf lymph was given by the Local Government Board to the vaccinators of Islington only eighteen months after the first departure from the printed instruction, but this departure was due to the sanction given by the Board's own inspector. This sanction became the Board's by virtue of the act of their inspector, just as a railway company is responsible for any accident caused by the ignorance, carelessness, or inadvertence of one of their officials. The public vaccinators who were not responsible for the departure have had their awards withheld as a punishment, whereas punishment implies, or ought to imply, responsibility. You call this a hardship, I call it an injustice. It seems from what you say that we are all acting illegally, or, as you so euphemistically put it, are engaged in making "departures from the instructions"—the vaccinators in using tube calf lymph, the guardians in paying for it out of public funds, and the Local Government Board themselves in making the 20 per cent. regulation. The droll and unfair thing is that only the vaccinators are put in the stocks. Like you, I hope for happier times and the advent of better legislation. Will you allow me, as a public vaccinator of over sixteen years' experience, to express my views very briefly on two subjects connected with public vaccination—namely, inspection and the supply of tube calf lymph?

First, with regard to inspection. Inspection of the stations should be made two or three times a year and without notice given. At present an inspection resolves itself into a more or less pleasant chat about the weather, numbers, insusceptibility to vaccination and the like, and then the infrequent visitor is off. The inspector should inspect everything

about the station and write in a book for the purpose a brief report of what he has seen, the cleanliness of the place, and his impressions generally. This report book should be laid before the guardians at their next meeting, or before whatever body may in the future be entrusted with the arrangements for public vaccination. This board or council should have a standing committee to visit the station and see for themselves how the work of vaccination is carried on. Had guardians in the past, through some such committee, come more in touch with our work, there would in my opinion have been much less objection displayed towards vaccination than has unfortunately been exhibited.

Secondly, as to the supply of tube calf lymph to public vaccination stations. There can be no doubt that a large number of parents prefer their children to be vaccinated with calf lymph, while others, again, prefer them to be done from other children. Why not satisfy both classes of parents at the public stations without any of the hesitation or objection or discussion that must inevitably take place if the public vaccinator tries to comply with the wishes of the Local Government Board at a station where tube calf lymph is supplied him for use and at which parents are informed by conspicuous notices on their vaccination papers that they can have it if they prefer it? The only problem to solve is how to obtain this calf lymph perfectly fresh and from a source the Local Government Board approve of. That can be easily solved. For example, in Islington, which is the largest and most populous parish in the metropolis, there are two vaccination officers and five public vaccinators, each of the latter, as I have said before, receiving weekly three tubes of Dr. Renner's calf lymph. In future the vaccination officers should be instructed to call in the morning at the calf station or stations (for more than one are needed in this vast city) appointed by the Local Government Board, and receive from the vaccinators there the requisite number of tubes of calf lymph freshly taken and placed in envelopes containing the date and the number of the calf from which the lymph was taken, and also officially sealed. These envelopes should be delivered by the vaccination officers to the public vaccinators, and the latter should be stringently bound to use only that calf lymph at their stations on that same day. The calf lymph taken in the morning would thus be used before there was any chance of it losing its efficacy, and its source would be guaranteed by the Local Government Board. What applies at Islington would apply at the other parishes of London, to which alone in these suggestions I refer, as I know nothing of vaccination in the country and provincial towns.—I am, Sirs, yours faithfully,

ANDREW D. DUCAT, M.D. Edin.

Highbury, N., Nov. 23rd, 1896.

To the Editors of THE LANCET.

SIRS,—In reference to Dr. Ducat's letter in THE LANCET of Nov. 21st kindly allow me to narrate my experience. When I was first appointed public vaccinator of this district, which is an extremely large one and sparsely populated, I found the vaccination in a deplorable condition—30 per cent unvaccinated and the station system a dead letter. I commenced vaccinating with Dr. Renner's lymph, paying for it myself, and I may say *en passant* that I had 95 per cent. of success with first vaccinations. There are four stations at distances from my house necessitating travelling one hundred miles a year. The average attendance is 1·5 and the total fees per annum is from £2 to £3. With the small number of attendances and the long distances arm-to-arm vaccination is an impossibility. Yet the inspector will not give me the grant because of the calf lymph; and the department threatened last year to ask me to resign, but thought better of it when they found there would be no one fool enough to accept the office. What I do now is this: I vaccinate patients with Dr. Renner's lymph privately at their own homes when I happen to be near and if they cannot pay give them it. This is a much more convenient plan for me, and as the fees are so small it would pay me to be rid of an appointment which only brings red-tape inspectors down to find fault with hard-worked men and who do not appreciate the difficulties of vaccination in country districts. I trust the department will not continue to refuse to recognise calf lymph vaccination especially in the face of the recent Commission report.

I am, Sirs, yours truly,

Patrington, Nov. 21st, 1896. W. H. COATES, M.B. Durh., &c.

THE READING OF PAPERS AT CONGRESSES.

To the Editors of THE LANCET.

SIRS,—Early last summer I received an autograph letter—not a circular—from the secretary of the Sanitary Institute stating that the committee of the Institute thought "the prevention of deaf-mutism" a subject which ought to be discussed at the Newcastle Congress and asking me to read a paper. The date of the paper was fixed *absolutely* for Monday, Sept. 7th, after I pointed out to the committee that I had engagements which made my absence from Glasgow very difficult.

I should say that I am not a member of the Institute. I went to Newcastle only because the committee asked me. As is so often the case, my paper was crowded out. As a protest I wrote asking my expenses. Although I have satisfied the committee by sending copies of their letters fixing the date of the paper that the fault lay with them they refuse to refund my expenses. I write this letter to warn your readers who may have similar requests made to them by the committee of the Sanitary Institute and in the hope that my protest may tend to the better management of affairs in the future.

I am, Sirs, yours sincerely,

Pollokshields, Glasgow, Nov. 19th, 1896. JAMES KERR LOVE.

"ON THE SERO-DIAGNOSIS OF TYPHOID FEVER."

To the Editors of THE LANCET.

SIRS,—In his article in THE LANCET of Nov. 14th on what he well terms "Sero-diagnosis" Professor Widal expresses surprise that I, in my communication on the same subject in THE LANCET of Sept. 19th, did not make more reference to his work. I should have been glad to do so had the facts allowed it. My article appearing in your columns was written on July 15th, just before terminating my stay in Vienna and my work in Professor Gruber's laboratory. At that time I could only refer to what I can still do no more than call Professor Widal's short communication of June 26th. That communication contains no mention of the improvised method. Both methods are practically identical with those of Gruber and Durham;[1] and the latter one resembling, but, I maintain, less exact than, the method employed by me. Professor Widal presumably elaborated between his communications of June 26th and July 24th. Now my method we were employing in Vienna from March onwards. The agglutinating action of some human sera (and especially of that of typhoid patients) I had observed at that time, and it was mentioned by Professor Gruber at the Medical Congress in Wiesbaden on April 9th, when he also pointed out that dilution would consequently be necessary in using the reaction for diagnostic purposes. Professor Widal appears to imagine that this was not known until his communication of June 26th. In view, then, of the individual differences of power of human serum, and having regard to my own experience, I must, in spite of what Professor Widal writes, believe that exact measurements should accompany each observation.—I am, Sirs, yours truly,

Berlin, November, 1896. ALBERT S. GRÜNBAUM.

"WORDS OF WISDOM."

To the Editors of THE LANCET.

SIRS,—THE LANCET of Nov. 21st contained an address by Dr. Wadham to the students of St. George's Hospital and an annotation in which you paid it a very happy and just tribute by speaking of it as "words of wisdom." May I be allowed to add to what you said in appreciation of the address that the part which struck me most forcibly when I heard it delivered was that which emphasised the value of sympathy. The medical knowledge of to-day may be considered as foolishness in the future, but the power of sympathy is eternal. It was his capacity for sympathy, believe me, more than his knowledge of the world which enabled Dr. Wadham, whilst he ruled supreme as dean of

[1] As a matter of history it should be observed that these investigators pointed out the agglutinating properties of immunising serum *previously* to Pfeiffer and Kolle.

St. George's School, to know so intimately the leading characteristics and chief peculiarities of a vast majority of the students, and this knowledge enabled him to raise an *esprit de corps* and discipline which no committee could reasonably hope to maintain. His sympathy with his patients, with his nurses, and with his pupils is, I am sure, the quality by which he is best remembered by those with whom he was brought into intimate contact.

I am, Sirs, your obedient servant,

Nov. 24th, 1896. AN OLD PUPIL.

"HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—Now that we hear so much respecting hospital abuse two or three suggestions as to the partial cause of it may not be out of place from a suburban dweller. I am practising in a suburban locality within easy distance by road or rail of several different hospitals, the admission to some of them being free, to others by ticket or recommendation. There also dwell in my neighbourhood clergymen and others who have recommendations to give, and it is the giving indiscriminately of these that constitutes one abuse. For instance, patients of mine, while under my treatment, have been given notes and sent to hospitals for conditions that could easily have been treated in their own homes by any practitioner. Not that the patients sought these notes, but were afraid of offending certain great personages if they refused. Ordinary conjunctivitis, dyspepsia, bruises to arm, gonorrhœal and many other common complaints, not among the very poor, but a class above that. The hospital authorities do not like to refuse patients coming with recommendations from some of their influential supporters, but at the same time crowds of these cases tend to absorb the funds of the hospital, take up the time of the staff, and impoverish the general practitioner. In cases of free hospital people will spend their time, railway fare, and other expenses in order that they can go and get a large bottle of medicine to last a week or more without having to pay for advice or medicine, many of them if they give a few coppers once a year to hospital collections considering themselves subscribers and entitled to get as much as they can.

I am under the impression that hospitals were intended for the treatment of the poor or for such cases as could not be treated beneficially at their own homes, not as a kind of fad just to please people. When differently managed we shall hear less of the poor financial condition of them and less of their abuse.

At present the election of direct representatives is absorbing so much attention. Let us venture to hope that whoever succeed in being the favoured three will be able to point out to their *confrères* some of the following facts. That although so much has been said and written against medical aid associations, upon one of them advertising a vacancy from thirty to forty applicants, including university graduates, immediately apply, testimonials, &c., *ad libitum* as to fitness for the post, all desirous and hopeful of being sweated, underpaid, and assuming a subservient position. Will our representatives be doing right in endeavouring to restrict the doings of these associations or to restrict the doings of the medical fraternity? I am afraid medical aid associations are now quite strong enough and quite able to take care of themselves, and have sufficient *esprit de corps* among their supporters to maintain their position. Can the same remark be made in reference to the profession? Our popular representatives will also be able to point out to the great guns of the Council how in many districts philanthropic ladies go round canvassing for midwifery work on the grounds that their highly qualified, clever, and able nurse is far preferable to a medical man and so much cheaper. These are not nurses in the sense that nurses used to be, but diploma'd and self-assertive practitioners, who will probably before long enroll themselves as a profession, body, or corporation to grant diplomas, &c. When herbalists and various specialists of that genus come rather more to the fore, and assume degrees and appellations of their own creation and demonstrate that they can snap their fingers at graduates of a different stamp, then will indignation and surprise be expressed and there will be a tame endeavour to put the house in order. I am not aware that at the present time any pretender dare assume to be, or in any way lead the public to assume, that he is a properly qualified solicitor. At any rate, let us hopefully look forward trusting that new blood infused into the old body may have a reviving effect. Apologising for troubling you on a well-worn subject,

I am, Sirs, yours very truly,

Nov. 23rd, 1896. HYOSCYAMUS.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—I am truly sorry the medical men of Great Yarmouth cannot see the wisdom of withdrawing a couple at least of the provisions contained in their manifesto—one especially which dictates as to who shall, and who shall not, join a friendly society. In this matter a blister has been applied which the friendlies are obviously determined to resent. I have had several years' experience of friendly societies' work both in the north and midlands, and I can assure my brother practitioners at Yarmouth that, contrary to their expectations and contrary to the opinion expressed last week by one of your contemporaries, the Yarmouth friendly societies will have no difficulty whatever in selecting a good man from hundreds of applicants. I read in last week's issue of the *Eastern Gazette* that within twenty-four hours of the speech made in favour of establishing an institution (which speech had, of course, been sent up to the Central News, and consequently appeared in the metropolitan and provincial press) applications began to pour in from London and the provinces, two arriving immediately after it was known that the clubs refused to recognise the manifesto in its entirety. Since then the promoters of the scheme are simply taxed to answer letters from scores of applicants. Recently six advertisements in the lay press brought an institution with which I was connected no less than seventy-four applicants for an assistancy at one of these associations at a salary of £300 per annum. That the profession is overstocked you well know, Sirs, and, therefore, an appointment of this kind at £400 or £500 a year does not, to put it plainly, go a begging nowadays. Disregarding the advice given by a certain journal, which has most unwisely advised medical men to stand out, I trust the men of Yarmouth and Gorleston will try yet to come to some friendly settlement with their club. There are two well-known and much-respected medical knights a Norwich, I refer to Sir F. Bateman and Sir P. Eade, who would, I feel certain, mediate readily, especially one who is consulting physician to the Norwich Friendly Society's Institution. I hope it is not too late. I can assure you, Sirs, that in spite of all the tall talk about professional honour and dignity plenty of good men—and men of honour, too—are only too ready to accept such an appointment through divers causes, and to whom, perhaps, it may be a veritable godsend. The question of wage-limit touches on the liberty or independence of the subject. If the medical men of Yarmouth will insist on their supposed right to say who shall and who shall not join a club, depend upon it they will fail and a flourishing institution will result. These institutions must not be confounded with medical aid and insurance societies, which canvass from door to door. Many of the profession are unaware that they are when once formed and duly registered indirectly Government concerns registered under the Friendly Societies Act. They have special privileges accorded to them—e.g., exemption from stamp duty, income-tax, &c. I merely mention this to show you that quite a different course should have been taken from that advocated by a small medical journal recently and which to no small extent has been the means of almost coercing the Yarmouth medical men to adopt an attitude which will only end disastrously. Again, I say, if there are evils existing under the present scheme choose the lesser of the two by keeping your clubs. A little diplomacy and time may yet remedy them.

I am, Sirs, yours faithfully,

Nov. 24th, 1896. M.D. EDIN.

"THE MEDICAL SERVICE AT ST. PAUL'S."

To the Editors of THE LANCET.

SIRS,—"Timeo Danaos" makes a bold assertion in THE LANCET of Nov. 7th when he declares that the unwonted activity ("effrontery," if he prefers the word) of "the churches" indicates a reaction against science—a reaction "triumphantly proclaimed in high places." That religion has to a great extent confounded and put to shame that vaunting pseudo-science which declares Christianity to be a dream and the Almighty Himself an old

wives' fable is, I trust, true; but your readers will readily recall the names of many (not only of our own profession) who, while earnest and distinguished in the pursuit of science, have been also devout upholders of the faith. To them there has been no insuperable difficulty in making religion and science go hand in hand, nor have they found the two contradictory. Your correspondent's assertion that for half a century the Church of England has been coquetting with that of Rome would be outrageously insulting to English Churchmen did it not demonstrate how uninformed (or misinformed) he is of the nature of the English Church, of her past history, and of her progress during the present reign.

What does "Timeo Danaos" mean by a "*Saturnian* age of ignorance and obscurantism"? The Saturnian age was the age of gold—mythical, of course, but believed in by the ancients, who longed for its return. It was to them the very reverse of an age of ignorance and obscurantism. It was the age of universal human happiness, of the dawn of civilisation, intelligence, and progress. One of the old poets (perhaps one of your readers will kindly tell me which—I cannot remember) has the triumphant line—

"Nunc Astræa redux, redeunt Saturnia regna!" [1]

And if your correspondent will look in the author from whose works he takes his *nom de plume* he will find this:

"Primus ab Ætherio venit Saturnus Olympo,
* * * * *
Aurea quæ perhibent, illo sub rege fuere
Sæcula: sic placida populos in pace regebat."

And the same great poet would, had the idea of the Saturnian age which "Timeo Danaos" holds prevailed generally, have risked his neck when he wrote of Augustus—

"..... Aurea condet
Sæcula qui rursus Latio regnata per arva
Saturno quondam."

This is a trivial matter in itself, but I dwell upon it because the perverted meaning which "Timeo Danaos" puts upon the old classical phrase illustrates the error in his conception of the relations between religion and science. In each case he mistakes dawn for sunset, light for darkness.

Why we should choose Asklepios for our patron "Timeo Danaos" does not explain, unless, indeed, his assertion that that mythical personage was "our real father" is to be accepted as an explanation. Asklepios was, according to ancient fable, one of the somewhat numerous sons of Apollo. A little difference between his father and mother led to his being born in fire—the circumstances were not very creditable to either of his parents. He was educated by the centaur Cheiron, who taught him how to heal the sick and how to hunt. Surely such a history makes him but an odd patron for a gentleman who troubles lest "ignorance and obscurantism" should be brought by religion to veil or extinguish the pure light of science. St. Luke had, at all events, certainly a real existence. He was a physician. He was one of the first followers of the great Founder of the Christian Faith—of Him whom a very considerable proportion of the inhabitants of the civilised world believe to be divine, to be the source of all truth, of all knowledge, and of all science. Your correspondent is, of course, welcome to his opinions, though I hope he may one day change them. And he has the right to express them; but he ought not in doing so to be gratuitously offensive to those who differ from him or to make charges which can hardly be supported by evidence.

I am, Sirs, yours faithfully,

Nov. 9th, 1896. ANGLO-CATHOLIC.

[1] Does our correspondent refer to Ecl. iv., 9, which runs—"Jam redit et virgo redeunt Saturnia regna."—ED. L.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Royal Infirmary.

As may be remembered, the need of increased accommodation at the infirmary both for patients and administrative purposes has been long felt, and various schemes have been suggested for providing it. The infirmary board put forward one some time ago for enlargement, which was rejected by the trustees as it involved considerable encroachment on the open space surrounding the present building. After the lapse of two years the board submitted other plans, providing for 100 more beds, but they were considered by many of the trustees little less objectionable than the first plans, and an amendment was carried in favour of gradual rebuilding. A poll was demanded by the board, with the result that 442 votes were for the amendment and 154 for the resolution of the board of management. The actual outcome of all this was the adoption of a proposal by Dr. Leech, "That before proceeding further a committee, consisting of the members of the Infirmary Board and an equal number of trustees who are not members of the board, be appointed to report on the best means to be adopted for increasing the accommodation afforded by the institution." This "grand committee" was formed and has been deliberating for nearly two years. The chief question was—"whether to rebuild on the present site or bring the existing building up to date, so to speak, while reducing the number of beds, and erect a new hospital at Stanley-grove." In June, last year, this grand committee appointed a sub-committee to consider whether and how additional accommodation could be best provided without seriously encroaching on the present vacant land. On Aug. 27th following the sub-committee presented two reports, a majority report in favour of rebuilding, as the only fit and proper way of bringing up the infirmary to present requirements, and a minority report in favour of additions, alterations, and modifications of the present building—that is, in favour of patching and mending. Segregation of the committee was carried out still further, for the majority and minority were constituted two sub-committees, and a third sub-committee was appointed to report on a third plan—for providing additional accommodation "elsewhere," meaning, of course, on the Stanley-grove site. The majority sub-committee, and the third sub-committee have now reported and submitted plans to the grand committee; the minority sub-committee—in favour of patching—not, it seems, having done so. The scheme of the third sub-committee is for a hospital of 265 beds at Stanley-grove, and for bringing the existing infirmary into a sound sanitary condition. The plan of the other sub-committee is to rebuild altogether and to provide beds for 428 patients, as against 190 on the present site and 265 at Stanley-grove. A large majority of the grand committee—26 to 8, including the members of the infirmary board—voted for rebuilding. Out of the 42 members of the committee, 38 were present. The lord mayor, Alderman J. F. Roberts (a brother, by the way, of Sir Wm. Roberts), presided. This large majority of so influential a committee ought to have great weight with the trustees, in whose hands the final decision rests, but the result is by no means certain. One thing is clear, that in the committee there was an overwhelming feeling against splitting the infirmary and carrying the larger half to Stanley-grove. If, however, there is to be much encroachment on the vacant land round the present building strong opposition, however unreasonable, will be got up and the party for removal encouraged.

The Cancer Pavilion and Home.

The annual meeting of the supporters of this hospital was held on Friday afternoon at the institution in what seems now to be called Hospital-gardens, otherwise known as the Stanley-grove site. The record of the last three years shows a gradual but steady development. In 1894 there were 94 in-patients and 36 out-patients. In 1896 the in-patients numbered 108; and the out-patients 52; annual subscriptions of £540 were received, as compared with £497 the previous year; the patients and their friends had contributed £34, a sum slightly in excess of that received in 1895; but the grant from the Hospital Sunday and Saturday Fund, however, was only £192, as compared with £237 in the previous year. Various gifts of considerable amount have been received and added to the endowment fund. Notwithstanding an increase of income there is, however, an overdraft at the bankers of nearly £443, partly due to special expenses which will not recur, it is hoped, for some time. Of the 127 new cases, eighty-three were from Manchester and the immediate neighbourhood, while forty-four were from outside the district. Many cases of recurrence after previous operations were admitted. During the past year the hospital had provided a permanent home for thirty-nine patients who could not be properly treated at their own homes. They were admitted in the last stage of disease, beyond hope of cure, and were taken in to alleviate their sufferings while life lasted. All died in the hospital, and of course the death-rate was very high and could not be compared with that of general hospitals.

St. Mary's Hospital and the Lewis Trust.

The differences of opinion between the authorities of St.

Mary's Hospital and the trustees of the Lewis bequest seem no nearer adjustment than they were. In a letter from the secretary of the Trust to the secretary of St. Mary's Hospital, of Wednesday last, he says that the scheme as already given cannot be modified—i.e., as to the Stanley-grove site, &c.—and that, regretting the unwillingness of the committee of St. Mary's Hospital to accept it, assuming that this is the deliberate judgment of the subscribers to the hospital, it would be useless to continue negotiations with the joint committee of St. Mary's and the Southern Hospital, "and they (the trustees) have, therefore, no alternative but to withdraw their offer of £70,000 for the erection of a new building to take the place of the present St. Mary's and Southern Hospitals." Each party to the controversy thinks reason is on its side, but the poor women of Manchester, if they think about it at all, will consider it unreasonable, if they, from no fault of theirs, must lose the potential benefits of £70,000. The authorities of St. Mary's Hospital put forward the distance to Stanley-grove as one of the chief objections to the amalgamation scheme; but as the hospital would be for in-patients only, the difficulty could be got over by means of an easy running ambulance, which would make the journey in a quarter of an hour from the present St. Mary's Hospital, where the patients would probably first attend. It is easy to see, however, that the loss of independence, the difficulties of dual control, and the prospect of gradual absorption are not attractive to those who have the interests of the older institution in their keeping.

The Sewage Effluent Problem.

The city council on Wednesday last decided by an almost unanimous vote that they would not have the sewage affluent carried off by a sixteen-miles conduit to the estuary of the Mersey. An amendment was adopted to the effect that the culvert—if a culvert is decided on—shall terminate at Thelwall, some three miles above Warrington. This decision is no doubt due to the serious effect the wholesale deprivation of water by the former scheme would have on the Ship Canal and various other interests—as, for instance, those of Warrington. Warrington, it seems, sends its own sewage into the river wholly untreated, but will be quite ready to object to the Manchester effluent if it is not quite irreproachable. It will, therefore, be necessary for its purification to be carried further than at present before the Thelwell outfall can be adopted, and this cannot be done without considerable further expense.

Hospital Saturday and Sunday Fund.

The annual meeting in support of the above fund was held in the Manchester Town Hall yesterday. In the absence of the Lord Mayor the chair was taken by the Mayor of Salford. The results of the collections were as follows:—Hospital Sunday, 1896, £4136 0*s.* 6*d.*; 1895, £4125 17*s.* 8*d.* Hospital Saturday, 1896, £4179 7*s.* 8*d.*; 1895, £4074 15*s.* The total of the two days, therefore, is £8315 8*s.* 2*d* for this year, against £8200 12*s.* 8*d.* in 1895. The chief increase is in the Saturday fund, where it is something over £104. The amount distributed to the various hospitals will be £7500.

The Manchester Hospital for Consumption.

This most useful and deserving institution, with its out-patient department in Manchester, and its hospital for in-patients at Bowdon, is like many others hampered and restricted in its operation from lack of means. It was therefore determined some time ago to hold a bazaar, that curious, but often eminently successful, method of raising money. It is to be held in St. James' Hall, Manchester, and will extend over four days. Her Royal Highness the Princess Louise opens it on Wednesday, and on the following days it will be opened by the Lady Newton, the Lady Mayoress, Miss Roberts, and Miss Balfour, respectively. The organisation is very complete and elaborate, and the temptations held out to induce visitors to assist in a charitable effort are almost innumerable and, it is hoped, irresistible.

Nov. 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh University Field Bazaar.

ON Thursday, Friday, and Saturday of last week a bazaar was held in the Music-hall, Edinburgh, to raise money for the equipment of the new field for athletics for the use of the students of the University. The field is situated at Colinton and the sum of £10,000 has already been raised for its purchase. For the suitable equipment of the field a further sum of £2000 was required, and it was to raise this sum that the bazaar had been designed. On Thursday the Right Honourable A. J. Balfour, the Chancellor of the University, performed the opening ceremony in the presence of a large and distinguished assemblage. On Friday the bazaar was opened by Lord Provost Macdonald and on Saturday by Lord Stormouth-Darling. The total drawings amounted to £3156, a sum which fully realised the most sanguine anticipations. One of the features of the bazaar was the issue of a special number of the *Student* magazine, which contained photographs of various university officials and many interesting literary contributions from past and present alumni.

First Year Medical Students in Edinburgh University.

From the statistics of the October examinations it appears that the total number of first year medical students at Edinburgh University is 218. The detailed statistics are of interest and are as follows: Passed University preliminary examination, 53; with outside exemptions, 7; entirely with outside exemptions, 82; and exempted by M.A. qualification, 6. Thus 148 completed their preliminary examination in October of this year, as against 128 in October, 1895; 70 students had formerly completed their preliminary or were otherwise accounted for. Of a total of 283 women students there are 48 extra-academical graduation students of medicine.

Princess Louise at the Edinburgh Jubilee Nurses' Institute.

On Monday Her Royal Highness Princess Louise opened an addition to the Scottish District Training Home of the Queen Victoria's Jubilee Institute for Nurses. The addition consisted of a hall in which the lectures to the nurses are to be delivered and some other necessary accommodation. The Princess was accompanied by the Marquis of Lorne, who made a speech showing a high sense of appreciation of the work that was being done by the institute. Lord Reay, who presided, stated that they had now 129 Queen's nurses, 72 affiliated associations, and during the year 14 branches had been added to the institute. Dr. Joseph Bell and the Lord Provost also took part in the proceedings.

Edinburgh Royal Infirmary.

At the meeting of the managers of the Royal Infirmary on Monday a statement of the income for the past financial year was submitted. The ordinary income amounted to £30,682 showing a decrease of £403 on the preceding year. On students' hospital tickets there was a decrease of £180 and on nurses' training fees a decrease of £27. The extraordinary income amounted to £76,363, this large sum being made up of £50,000 bequeathed by the late Earl of Moray and £11,000 from the late Mr. Peter Waddell. The expenditure for the year was £39,282. The convener of the house committee, Mr. John Walcot, submitted a statement showing the income and expenditure during the last six years, which brought out several particulars of considerable interest bearing upon both income and expenditure of the past year as compared with those of 1890–91. Amongst these are noted a decrease in expenditure in several items—namely, in coals £387, in lights £365, and in medical expenses the large sum of £1443. The total expenditure had been diminished by £1118, while the number of in-door patients had risen from 8769 to 9478, being an average yearly increase of 718. The daily average of resident patients had increased from 648 to 706. The number of nurses had increased from 135 to 168. The total cost per bed in 1891 was £62 10*s.*; in 1896 it was £55 12*s.*—a reduction of £6 18*s.* per bed. It is needless to dwell on the instructiveness and value of a report of this kind, but those to whose efforts this saving is to be attributed may well be congratulated on their success.

The Parkin Prize at the Royal College of Physicians of Edinburgh.

In terms of the bequest made to the Royal College of Physicians of Edinburgh by the late Dr. John Parkin, Fellow of the College, a prize is offered triennially for the best essay on certain subjects connected with medicine. The subject of the essay for the present period is: "On the curative effects of carbonic acid gas or other forms of carbon in cholera for different forms of fever and other diseases." The prize is of the value of £100 sterling and is open to competitors of all nations. Essays intended for competition, which must be written in the English language, will be

received by the secretary not later than Jan. 1st, 1898. Each essay must bear a motto and be accompanied by a sealed envelope bearing the same motto outside and the author's name inside. The successful candidate must publish his essay at his own expense and present a printed copy of it to the College within the space of three months after the adjudication of the prize.

The Proposed Scottish Medical Journal.

Some comment has been made upon the fact that the Glasgow school is not taking a more prominent part in the movement for the establishment of a Scottish medical journal. In the direction of the journal representatives of Edinburgh are to be associated with representatives from Aberdeen and Dundee, but no Glasgow name appears on the committee of management. It must not, however, be concluded that the profession in Glasgow is in any way hostile to the new journal. On the contrary, it has many well-wishers, who would be glad to see one successful journal representing all the Scottish centres of medical activity and circulating amongst Scottish graduates in all parts of the world. But it must be remembered that the Glasgow school has its own journal, which has achieved no inconsiderable measure of success and fulfils a distinct function, especially for Glasgow graduates. And it could scarcely be expected that Glasgow should give up its own journal on the chance of a success which has not yet been accomplished. This was the less to be expected seeing that the promoters of the new journal in Edinburgh could not undertake to cease the issue of their own local medical journal. Indeed, it is well known that that journal is to be continued, and that, too, with energy, so that it may well prove a formidable rival to the proposed new journal. The desire for a comprehensive journal representing all Scottish interests has doubtless long been latent in many breasts. But its appearance in active form in the east is the result of a quarrel which has yet to be fought out. Under these circumstances outsiders may well stand aside until the combatants have adjusted their differences. Glasgow in the meanwhile sticks to its own journal, and looking eastward prays, "May the best man win."

Professor McKendrick on Colour and Colour Theories.

The third of a series of lectures dealing with art, and delivered under the auspices of the Glasgow corporation, was given in the corporation galleries on the 21st inst. by Professor McKendrick. The lecturer dealt with the physical causes of colour and with the mechanisms through which these produced corresponding sensations and his words were illustrated by a large number of striking and ingenious experiments. In discussing the rival theories of colour-perception Professor McKendrick expressed his preference for that of Young, as modified by Helmholtz, over the theory suggested by Hering of Prague. Dr. Fraser Harris and Lord Reginald Stewart assisted Professor McKendrick in conducting the experiments. There was a crowded audience, to whom the lecture was evidently a great treat. The chair was taken by Councillor J. C. Robertson, J.P.

Professor Wright on Glasgow Sewage.

The students of the class of agriculture in the Glasgow Technical College were on the 21st inst. conducted over the sewage works at Dalmarnoch by Mr. Melvin, the manager. After the inspection Professor Wright addressed the students, and pointed out that whilst the primary object of the works was the purification of the Clyde, the scheme in its secondary relations had a close connexion with the art of agriculture. It was estimated that the total sewage of Glasgow and the immediate neighbourhood had a value for manurial purposes of £200,000 per annum. About a quarter of this is now being dealt with at the Dalmarnoch Works, and when the additional buildings are completed the corporation will be able to offer to farmers a large quantity of manure in the very suitable form of a dry powder. Professor Wright had no hesitation in saying that such a preparation would have considerable manurial value, containing, as it would do, a large percentage of lime and a fair proportion of nitrogen. He anticipated that next year the Technical College would be able to institute a series of experiments on the farms they controlled, and he looked forward to the results of these experiments as likely to be of much importance both to agriculture as well as to large corporations like the city of Glasgow.

Meetings of Scientific Societies.

At the opening meeting of the Physical Society of the University of Glasgow, on the 21st inst., Mr. Magnus Maclean, D.Sc., delivered his presidential address, choosing as his subject the Roentgen Rays. The various theories in relation to these were discussed and numerous experiments shown. A vote of thanks was awarded to the lecturer on the motion of Lord Kelvin, seconded by Dr. J. Macintyre. At a recent meeting of the Glasgow Philosophical Society Professor W. Smart was elected a vice-president in succession to Professor Joseph Coats, and Dr. Freeland Fergus was appointed honorary secretary to the society. The St. Mungo's College Medical Society met on the 19th inst. to hear a paper by Professor J. Dougall on Water, its Properties and Uses.

Death of Mr. David Robertson, LL.D.

This well-known naturalist passed away on the 21st. inst. in the ninetieth year of his age. The details of his career, from its commencement as "herd laddie" on a farm near East Kilbride to its close as the honoured member of numerous scientific societies both at home and abroad, have been told in the biography written by the Rev. R. Stebbing, M.A., of Oxford, with the title of "The Cumbrae Naturalist." Mr. Robertson devoted many years of his life to the study of the natural history of the Clyde Basin and recently founded a marine biological station at Millport. Two years ago the University of Glasgow conferred on him the degree of LL.D.

Medical Appointments.

Mr. Robert Kennedy, M.A., B.Sc., M.D. Glasg., and Mr. Alfred A. Young, M.A., M.B., C.M. Glasg., have been appointed dispensary surgeons to the Glasgow Western Infirmary; Mr. John Morton, M.A., M.B., C.M. Glasg., has been elected an assistant dispensary surgeon. Mr. J. S. McConville, M.D. Glasg., has resigned his appointment as physician to the Glasgow Central Dispensary and the directors intimate their intention to fill this vacancy and to appoint an extra physician in the department for diseases of children. The directors of the Glasgow Maternity Hospital are advertising for applications for the position of out-door physician for the southern district of the city. The post of apothecary to the Royal Infirmary, Glasgow, is also vacant. Mr. F. H. Clarke, M.B. Glasg., has been appointed physician to the Dumfries and Galloway Royal Infirmary. Mr. W. T. Merry Wallace, M.B., C.M. Glasg., Kirkcaldy, has been elected as medical officer and public vaccinator for the eastern district of the parish of Dysart, Fife. Mr. John Landsborough, M.B., C.M. Edin., has been appointed house surgeon to the Ayr County Hospital.

Glasgow Nursing Association.

The annual meeting of this association was held on the 20th inst., the chair being taken by Lord Overtoun. The report showed that there are at present seventy-two nurses on the staff, of whom twenty-two are district nurses engaged in rendering gratuitous services to the sick poor, and for this branch donations and subscriptions are received from the public. The other nurses are occupied in private nursing as their services are required, and for these services the association is paid, each nurse receiving from the association an annual salary. The difference between the total reached by the salaries and the charges of the nursing home and the amount paid by patients for private nursing is a profit to the association, and this is used to support the gratuitous work performed by the association through the district nurses. The value of this work is beyond question, but surely it ought to be supported on its merits. The profit made on private nursing has been earned by the nurses, and to them it ought to belong. How can it be legitimate to let out nurses at so much a week, to make money on the transaction, and then to apply that money for some other purpose? That the ulterior purpose is a laudable and unselfish one does not affect the essential character of the transaction.

Nov. 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Dublin Orthopædic Hospital.

THE annual meeting of the friends and subscribers of this hospital took place on Nov. 18th, under the presidency of the

Right Hon. Lord Justice Walker, and was largely attended. It was suggested that the foundation of county beds should be paid for by the various boards of guardians in whose charge many of the poor children were.

The Cork-street Fever Hospital.

The new convalescent home, Beneavin, Glasnevin, was opened on Nov. 19th. The new home is small and capable at present of accommodating only twenty-six patients, but it is hoped that it may soon be much increased in size. The opening ceremony was largely attended. Mr. Abraham Shacleton filled the chair, and interesting speeches were made by Dr. Grimshaw, the Registrar-General, and Sir Charles Cameron.

The New Derry Asylum.

It has been agreed to select a number of architects and ask them to send in plans for a building to accommodate 600 inmates. Mr. Roberts, the consulting architect for the Board of Control, estimates that to erect a new asylum costs £170 per patient, which includes everything except the furniture. In order to relieve the present overcrowding the farm buildings will probably be erected first, where a number of the harmless patients can be employed in cultivating the farm. It would appear that there is very great dissatisfaction in reference to this new asylum in the county of Derry. In the first place, the farmers, in the present depressed condition of agricultural matters, protest against increased taxation, and they naturally point to the half-empty workhouses in the county, which they think might be utilised for the harmless lunatics, and so the overcrowding of the asylum would be diminished. In the second place it is felt that, owing to the constitution of the board of guardians, the county at large is not represented. Of the twenty-two governors eleven are nominated by the Lord-Lieutenant, and these reside in the city of Derry or in its immediate neighbourhood, while the rest of the county, through the grand jury, appoint the other eleven governors. At the last Magherafelt Presentment Sessions Colonel Clarke, D.R., brought the whole question up for consideration, and pointed out that in the barony of Loughnishollen there is only one resident governor of the asylum to represent them, while in population this barony (58,440) it represents roughly one-third of the whole county (164,151), and constitutes a like amount of the taxation required from the county in its support. The valuation of the whole county for purposes of taxation is £399,979, while that of this barony is £103,893. A memorial, it was arranged, should be sent to the Lord-Lieutenant asking that this barony should be represented on the Derry Board of Asylum Governors proportionate to its population and to the taxation which it pays. Brigade-Surgeon Waters, M.D. R.U.I., C.B., J.P., supported the memorial, and if he were selected to be an additional representative on the Asylum Board no better appointment could well be made. His great experience and medical training would be invaluable.

Taxation in Ireland.

Owing to the agricultural look-out in Ireland being so gloomy at present all over the country attempts are being made to keep down taxation and especially the poor-rates. An impetus has been given to this agitation by the report made by the Royal Commission on the Financial Relations between England and Ireland, and many think the Government should refund the money overpaid by Ireland, so that it might be devoted to other purposes, especially to the maintenance of poor and harmless lunatics. The Monaghan guardians recently agreed with the governors of the asylum to rent two of the unoccupied wings of the workhouse at £150 per annum, but the Local Government Board declined to sanction the letting. This has given rise to great dissatisfaction.

Abolition of Unsanitary Property.

At a special meeting of the Belfast city corporation held on Nov. 21st it was decided, on the motion of Alderman Graham, M.D., chairman of the Public Health Committee, to adopt a scheme under "the Housing of the Working Classes Act," 1890, to close up a court as an unhealthy area and to clear away the houses in this area and to open up the district and continue the street, over thirty feet in width, in a direct line from Carlisle-circus to Royal-avenue, at a cost of £3500.

Hospital Appointments.

Mr. Spiller, M.B. R.U.I., has been appointed intern, and Mr. Beggs, M.B. R.U.I., extern, house surgeon to the Belfast Royal Hospital.

The Belfast Medical Students' Association.

The opening meeting of the Belfast Medical Students Association was held in the Surgery Lecture-room of Queen's College on Friday, Nov. 20th, when the retiring President, Mr. Magowan, M.B. R.U.I., having thanked the members for the support they had given him during his year of office, introduced his successor, Thomas Houston, M.B. R.U.I., who delivered an extremely interesting and able introductory address on antiseptic surgery. At its conclusion the President of Queen's College (Dr. Hamilton), having thanked Dr. Houston for his very cultivated address, gave a series of interesting details in reference to the new Students' Union, which the Lord Lieutenant of Ireland is to open early next year, and he mentioned, amongst other things, that a reception would be given at that time in order to introduce the students to their new buildings. Professor Byers, Professor Sinclair, Professor Symington, and Professor Thompson, who were present, addressed the students, all of them complimenting Dr. Houston on his address.

The Proposed New Hospital in Belfast.

The movement in favour of the erection of a new hospital in Belfast was fitly inaugurated on Nov. 23rd, when, at the quarterly meeting, an immense and influential audience adopted unanimously a resolution—"That, in commemoration of the long reign of the Queen, this meeting is of opinion that the project of building a new hospital on a new site be warmly taken up and that the Lord Mayor be requested to call a public meeting to consider the matter." This was moved by a very warm friend of the hospital movement, Dean Seaver, and seconded by the chairman of the medical staff, the head of the profession in Belfast, Professor Cuming, M.D., who stated that at a meeting of the staff held that morning it was resolved that "The staff are of opinion that in order to meet the pressing wants of the city a new hospital on a new site is urgently required, and that they request their chairman (Dr. Cuming) to lay this expression of their views before the quarterly meeting." Dr. Cuming said what they needed was a new hospital erected according to the best and most scientific plans, equipped with every appliance for the relief of suffering, provided with the best and most perfect sanitary arrangements, having a site spacious enough to give opportunities for suitable open-air exercise to such patients as could avail themselves of that advantage and also large enough to allow of future extension of the hospital buildings. A requisition, most extensively signed, has been presented to the Lord Mayor of Belfast asking him to summon a meeting of the citizens favourable to the new project of building a hospital in Belfast in commemoration of the long reign of the Queen.

Nov. 23rd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Immunisation against Typhoid Fever.

PROFESSOR PFEIFFER and Dr. Kolle, assistants to Professor Koch, have made a very important contribution to the subject of immunisation against typhoid fever. They point out that Dr. Haffkine claims that in British India he has immunised more than 100,000 people against cholera by subcutaneous injections of cholera agar cultures, and that experiments made by Dr. Kolle confirm Dr. Haffkine's opinions. Dr. Kolle states that whilst an injection of 0·5 gramme of normal blood serum is necessary to immunise a guinea-pig against cholera, the same effect is produced by 0·001 gramme of serum of a man who has previously received an injection of a cholera agar culture. The authors have discovered that the same conditions exist in the case of typhoid fever and they find that blood serum of typhoid fever convalescents, as well as that of animals immunised by repeated injections of typhoid cultures, contains a specific antitoxin. They have, moreover, investigated the possibility of immunising persons by a single injection of typhoid culture, using for this purpose a very virulent culture taken two months ago from the spleen of a patient suffering from typhoid fever. Of this culture 0·0005 c.c. injected into the peritoneal cavity of a guinea-pig weighing 300 grammes was sufficient to kill the animal, 0·5 gramme of normal human serum or 0·3 gramme of goat's serum having no antitoxic effect. Some men then received

an injection of a mixture of typhoid agar culture with meat broth, 1 c.c. of the mixture containing 0·002 c.c. of the fresh culture. A few hours after the injection the men suffered from slight rigors and giddiness. They slept uneasily, and their temperatures rose to 38·5° (101·2° F.), but next day they were quite well. Blood taken from these men was then injected into guinea-pigs, and six days later a quantity of the above-mentioned virulent typhoid culture was administered to the animals without any fatal result. These experiments show that the human blood serum becomes altered by a single injection of typhoid culture so that it immunises animals against typhoid fever. Probably the immunising action is due to certain antitoxins produced in the blood by the injected typhoid cultures. The blood of typhoid fever convalescents has the same quality. It is to be hoped that immunity against typhoid fever may be obtained by prophylactic injections just as in the case of cholera. If the serum can be obtained the injections can be easily performed by any practitioner during the prevalence of typhoid fever.

The Antitoxin Treatment of Tetanus.

The new tetanus antitoxin is now available for the medical profession, and has been administered to a patient suffering from tetanus in the Hospital of the Holy Spirit in Frankfurt. Dr. Willemer, physician to this hospital, reports the case as follows. A man twenty-three years of age caught cold on Sept. 19th, and four days afterwards observed a stiffness of his neck, which was soon followed by a tonic contraction of the muscles of the trunk. On the night of Sept. 29th clonic convulsions of the masseter muscles developed and on Sept. 30th he was brought to the hospital. No injury which might have caused the tetanic symptoms was discovered; well-marked opisthotonos and stiffness of the muscles of the chest, and the abdomen existed, but the lower extremities were but slightly involved. Trismus was not very obvious, for the patient could open his mouth fairly well, but swallowing was very difficult. The patient's temperature was 37·1° C. (98·8° F.). His pulse was 88, and his blood pressure 140 millimetres (five and a half inches) of mercury. On the following day the symptoms were worse, several clonic convulsions occurred, and trismus supervened. On Oct. 1st an injection of five grammes of antitoxin dissolved in fifty grammes of water was given. In the evening the patient said that he felt much better, and next day the clonic convulsions were less severe; but on the 3rd all the symptoms became as bad as ever, and four grammes were injected again on the 6th, after which date a conspicuous improvement took place. On the 7th the stiffness of the pectoral and abdominal muscles had decreased. On the 8th the opisthotonos was less developed; the legs could be for the first time slightly moved. On the 12th the patient was able to sit up in bed; on the 17th he could walk; and on the 23rd he was allowed to go home. Dr. Willemer points out that the case was rather severe and that the first injection produced only a temporary effect, but the second one was very successful. Perhaps the amount first injected was not large enough, especially as the patient had already been ill nine days. The antitoxin was injected into the subcutaneous tissue and not into a vein.

Death of Professor George Lewin.

Dr. George Lewin, Professor of Syphilology at the University of Berlin, died on Nov. 2nd at the age of seventy-six years. He was known not only as having introduced the method of treating syphilis by subcutaneous injections of mercury, but also as a man who had done good work in more than one branch of medical science. He was at first a pathologist, and very early in his career published an essay on the action of phosphorus on the organism. Afterwards he took up the subject of diseases of the throat. He used the laryngoscope while it was still a novelty, and was one of the first medical men who employed inhalations for the treatment of laryngeal diseases. After 1865 he devoted himself exclusively to venereal diseases and skin diseases, and in 1868 was appointed Professor at the University of Berlin as successor to the late Professor Bärensprung. The most important of his writings are those on Sycosis, on Argyrosis, on Cysticercus, and on Acromegaly. He resigned his chair only a few months ago, and was then succeeded by Professor Lesser of Leipzig.

Death of Professor Baumann.

Dr. Baumann, Professor of Medical Chemistry at the University of Freiburg in Baden, also died on Nov. 2nd. Although not a medical man in the strict sense of the word, and, moreover, only forty-nine years of age at the time of his death, he has contributed very much to the progress of medical science. He was the son of a chemist and served the full period of a pharmaceutical apprenticeship, after which he entered the Technical College of Stuttgart in order to complete his studies in chemistry, physics, and natural science. In Tübingen, where he went to take his diploma, the celebrated physiologist, Hoppe-Seyler, recognised the great talent of the young man, and not only made him his assistant, but when Professor Hoppe-Seyler had been elected to the professorship at the University of Strassburg in Alsace in 1872 Baumann accompanied him thither. In 1879 he was made director of the chemical department of the new Physiological Institute of Berlin, and in 1882 he became ordinary professor of medical chemistry in Freiburg, where he remained till his death. Professor Baumann's work included researches on the subject of metabolism, on the excretion of indican, on putrefaction in the intestines, and on cystin. He was the discoverer of the specific action of sulphonal and trional, and also of the presence of iodine in the thyroid gland,[1] this last being one of his latest and most notable achievements.

Conference on Leprosy.

There will be held in Berlin in October, 1897, a conference of delegates of different Governments to discuss the steady increase of leprosy and the apparent failure of all measures to check this plague. The date of the conference had been fixed for the month of March, but Professor Koch's absence necessitated a postponement, it being decided to await his return. The organising committee comprises the following names: A. Hansen, Bergen, Norway; Robert Koch and O. Lassar, Berlin; and Edward Ehlers, Copenhagen (secretary).

Nov. 23rd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Opening of the University.

YESTERDAY (Nov. 14th) in circumstances of sinister omen the "Sapienza," as our University is traditionally called, re-assembled for the year 1896-7. The Aula Magna, draped with tapestry and decked with evergreens, was crowded in every part as the Senatus Academicus, accompanied by the Minister of Public Instruction, occupied the dais. The proceedings began with a few words from the Rector, Professor Semeraro, who announced that last year's matriculated students numbered 2100, of whom 868 were enrolled in the faculty of law, 803 in that of medicine, 256 in the "sciences," and 182 in literature and philosophy. There were 91 graduates in law, 63 in medicine, 27 in philology, 3 in natural science, 3 in chemistry, 1 in physics, and 8 in pharmacy. An eloquent allusion to the lately deceased Professor of Latin, Occioni, and to Signor Sansonetti, professor of diplomacy, who had also gone over to the majority, brought the Rector's prolusion to a close, and he was immediately followed by the Professor of Moral Philosophy, Signor Labriola, who at once commanded the attention of the audience, as he discoursed on "L'Università e la Libertà della Scienza" (The University and the Freedom of Science). Much of what he said was admirable, alike in matter and in form, till he brought in personal allusions, which quickly evoked the partisanship of the students. Defining the powers of the Minister of Public Instruction as those of an administrator-in-chief of the higher schools and colleges, he constituted himself the apologist of Professor Pantaleoni, who had been summoned before the Superior Council of Public Instruction for intervening in political controversy to the prejudice of the Government in power. This he regarded as an abuse of authority and contrasted it with the procedure of an ex-Minister of Public Instruction (Dr. Baccelli), who, sixteen years ago, promoted from the secondary schools to the University a teacher to whom his (Baccelli's) predecessor had meted out punishment similar to that of Professor Pantaleoni. This sally (involving a reference to the ever-popular Baccelli) raised a storm of approbation from the students. The orator was now "on the warpath"; he denounced the Chamber

[1] THE LANCET, Feb. 29th, 1896, p. 592.

of Deputies for its "technical incompetence," and accused it of having "no other occupation than that of setting up or overturning Cabinets." Then he turned to the youths before him and augured for them an Italy worthier than the present—an Italy unimpaired by an African policy characterised by foolhardiness in its early stages and by something like cowardice is its later ones. By this time the younger portion of his audience was wrought up to the most frenzied demonstrations, mostly levelled at the Minister of Public Instruction (Signor Gianturco), whose position on the dais had become far from enviable—condemned as he was to hear his conduct impugned and the policy of his Government assailed. His excellency, in fact, remonstrated with Professor Labriola as the latter, amid deafening plaudits, resumed his seat, saying, "Mi avete attaccato ingiustamente, perchè io voglio la libertà della scienza" (You have attacked me unjustly, for I wish science to be free). Unfortunately, matters grew worse after the audience broke up and Signor Gianturco (a most able and estimable Minister), as he passed down the long lane of students was loudly hissed. The whole incident, as I have said, is of sinister omen for the tranquility and the work of the University. In professional circles, as also in the public press, Signor Labriola does not escape animadversion for giving so political, not to say polemical, a turn to a discourse which ought to have been purely academic. It is a misfortune of which no Minister of Public Instruction can be more cognisant than Dr. Baccelli, that Italian youth are too apt to import political passion into university life to the serious prejudice of their studies, not seldom leading to actual collision with the authorities, academic and municipal. That a member of the Senatus and "more by token" a professor of moral philosophy should have been the instigator of this latest outburst of spirit of faction on the students' part is, as I have said, the subject of much trenchant comment in the Roman world—comment of which we have not yet heard the last, if, indeed, it is not to be succeeded by official investigation and "discipline."

Professor G. B. Grassi and the Royal Society of London.

Our scientific circles are equally interested and gratified by the honour just bestowed on Professor Giovanni Battista Grassi of the University of Rome by your Royal Society, which at a late meeting unanimously awarded him the prize instituted in memory of Darwin, "a causa delle sue importanti scoperte" (on account of his important discoveries) "su' Termiti e su' Mureneidi"—discoveries bearing intimately on the Darwinian hypothesis. The honour has additional value in the estimation of Italians, as it has been conferred on only two English men of science—Huxley and Wallace.

Nov. 15th.

LITERARY INTELLIGENCE.—The publishing firm of Gustav Fischer of Jena have just issued the concluding part (Lieferung 27) of the "Handbuch der Speciellen Therapie innerer Krankheiten," edited by Dr. Penzholdt and Dr. Stintzing, which has been appearing at intervals for two years. The articles, which cover the whole range of medicine, are contributed by a large number of well-known physicians, and the work, which forms six volumes, will doubtless occupy a high place in the literature of therapeutics. The cost of the whole book is 80 marks (£4). A supplementary volume is announced to be published next year to contain articles on the Serum Treatment of Diphtheria by Dr. Ganghofner, on Sick Nursing by Dr. Mendelsohn, and the Treatment of Inflammations of the Abdomen arising from the Female Genitalia. The same firm have also just issued the third part of Professor Karl von Bardeleben's "Handbuch der Anatomie des Menschen," which is to be comprised in eight volumes. This instalment consists of "The Skull," by Dr. Graf Spee, and a noteworthy feature is the autotype reproduction of photographs which exhibit the characters of the bones in a strikingly natural manner.—The firm of J. B. Baillière et Fils (Paris) have issued the third volume of the "Traité de Médecine," edited by Dr. Brouardel, Dr. Gilbert, and Dr. Girode. It deals with parasitic diseases, intoxications, constitutional affections, and diseases of the skin. When completed it will form ten volumes. The same firm have also commenced the publication of similar treatise on Surgery, edited by M. Le Dentu and M. Delbet.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE sixty-first session of the General Council of Medical Education and Registration began on Tuesday, Nov. 24th, in the offices of the Council, Oxford-street, London. There was a full attendance of members.

The first day of the proceedings of the Medical Council is not always a very lively one. The Members have not got into harness, the committees have not reported, and a general air of uncertainty reigns. This was somewhat less the case on the present occasion, as the Members were in full attendance and clearly ready for work.

The old *personnel* of the Council was intact save in one conspicuous respect—the absence of the Rev. Dr. Haughton. To this gentleman the President in his opening address paid a just and well-merited tribute, which was greatly appreciated by Dr. Haughton's colleagues in the Council, who deeply regret that they will no longer enjoy the pleasure of working with the brilliant and genial Irishman.

The President's address showed how numerous and how important are the subjects which will engage the attention of the Council at its present sitting.

An important fact brought out in the proceedings is that the Medical Council has to reckon with the coöperation, not to say the domination, of the Privy Council in its work. This fact came out in several connexions in the course of Tuesday's and Wednesday's proceedings, and will doubtless appear more and more. It arose in connexion with the question of the action of the Council in regard to the Conjoint Examination in Ireland of the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Dublin and any future scheme for the rehabilitation or perpetuation of the Hall as an examining body. It appears also in connexion with the efforts of the Council for strengthening the disciplinary powers of the qualifying bodies, and it is gratifying to be able to infer from a letter by Sir Lennox Peel that their lordships of the Privy Council are in much practical sympathy with the General Medical Council in this matter, and would be prepared to help it. The words of Sir Lennox Peel are: "That their Lordships would be prepared to consider applications from the chartered medical bodies for supplemental charters granting disciplinary powers similar to those conferred upon the University of Cambridge. ..... The other licensing bodies could, if they should think fit, proceed by Statute, or in the case of the Scotch universities by Ordinance." The serious aspect of this question is the helplessness of most of the universities, and especially the Scottish universities. Some of them show a proper wish to acquire powers o dissociating themselves from graduates who have brought discredit on themselves and their universities by unworthy or disgraceful conduct. Others are more easy in regard to their duties in this respect. The action of the great University of Edinburgh is disappointing. Its secretary writes to the President of the Council that it cannot obtain the penal and disciplinary powers by application to the Privy Council and that the University Court "have further resolved that no action be taken in the meantime to obtain powers either from the Universities Commission or by Statute." The Universities of Glasgow and Aberdeen meet the question in a more satisfactory way, but are still more impressed with

their *non possumus* position than with a determination to acquire powers which are the proper complement of their degree-granting qualifications, and which, as regards *medical* degrees at least (which are also licenses to practise medicine), are essential for the protection of the public. It would be a misfortune if the possession of a degree in medicine conferred immunities on its possessor who behaves unworthily of his degree and his profession which were not shared by the possessor of a diploma from a corporation. This difference must be removed or the degree may have to be discredited. It is gratifying to know that this subject is still under the notice of the Executive Committee which has to report further to the Council.

Wednesday's work in the Council was very important. The Council had been moved at its last session to erase from the list of recognised preliminary examinations the "Examination for a Second-class Certificate (of First or Second Division) of the College of Preceptors," and the matter was referred to the Education Committee. The Committee reported on Wednesday to the effect that it would not be fair to deal with an isolated body and with one division of the kingdom only, and that any additional stringency of preliminary examinations which might be thought desirable should apply all round. They suggested that the Council should recommend to all bodies whose junior examinations in general education are recognised that it desires an increase of stringency, and that it should instruct the committee to consider the requirements of all such examinations and to report on the steps necessary for enforcing a higher and more uniform standard. The Council adopted the report of the Education Committee. The time asked by the Committee for this work—a year—is not too long considering the trouble it will involve. It will be the best service that the Council can do for the next century of medicine if it can make such regulations as will secure for future generations of students of medicine the basis of a sound general education. There was but one opinion in the Council on this subject, and there is reason to hope that the work will be done heartily and effectually. Medicine now includes so many sciences that it can only be pursued satisfactorily by men who are soundly educated before registration as medical students, and the large numbers entering the profession enable the Council to raise the standard without risk to the public convenience and with the prospect of great advantage to the public health.

The Council on Wednesday commenced a grave discussion affecting the future of the Apothecaries' Hall of Dublin. The best speech in favour of another opportunity being given of further existence to the Hall was from Sir Walter Foster. But the speech of Dr. Donald MacAlister and others on the other side showed the great indisposition to commit the Council to coöperation with this Body by appointing assistant examiners, and in the end Dr. MacAlister's counsels prevailed.

TUESDAY, NOV. 24TH.

New Member.

Dr. Edward Hallaran Bennett was introduced as the successor of the Rev. Dr. Haughton in the representation of the University of Dublin.

The President's Address.

Sir RICHARD QUAIN opened his address by a reference to the loss which the Council had sustained by the resignation of Dr. Haughton, and alluded in fitting terms to his successor, Dr. Bennett. He continued:—

"Next, it will be well for me to inform the Council briefly of the principal incidents which have occurred since its last meeting in June. On June 13th, 1896, it was my duty to communicate to the Royal College of Surgeons in Ireland, the Apothecaries' Hall, Dublin, and at the same time to the Privy Council, the resolution adopted by the Council on June 8th, 1896:—

'That the Council defers for the present the expression of an opinion on the application of the Apothecaries' Hall of Ireland for the appointment of assistant examiners in medicine and surgery and directs communications to be made to the Apothecaries' Hall and to the Royal College of Surgeons in Ireland with the view to their reconsideration of their respective positions, so that such a combination may be effected between them as may ensure that an efficient standard of examination shall be maintained by the General Board of Examiners which will be satisfactory to the Medical Council.'

As a result of this proceeding replies were received from the Royal College of Surgeons in Ireland declining to act in the manner suggested, and from the Apothecaries' Hall, Dublin, accepting the suggestion of the Council. These answers were forwarded to all the Members of the Council and to the Privy Council on July 1st last. The subject will be brought before the Council in due course in connexion with an application from the Apothecaries' Hall, Dublin, for the appointment of examiners in medicine and surgery and a request from the Privy Council for a decision by the Council. The report on the disciplinary powers of the several universities and colleges adopted by the Council was communicated to each of these institutions, to the Privy Council, and to Lord Kinnear, the chairman of the Scottish Universities' Commission. The replies, which are not as satisfactory as they might be, will be found in the programme of business of the Executive Committee. In connexion with this matter I would call attention to the fact that the University of Cambridge has informed the Council that it has obtained a disciplinary statute enabling it to deprive of his degree any graduate guilty of an offence punishable by imprisonment. This statute has enabled the University to deprive a person who is at present in prison convicted of felony of his degrees and all privileges enjoyed by him as a graduate. I would suggest that the replies which have been received should be referred to the sub-committee of the Executive Committee which prepared the previous report, with a view to taking such further steps as may be required."

[The PRESIDENT then referred to the resolution of the Council and the report adopted on June 9th, 1896, in regard to increased and improved instruction in midwifery and the conjoint examinations in Ireland; to the coming election; to the penal proceedings; and to the reports from the Education and Examination Committees to be submitted to the Council. After sketching shortly the work of previous Committees he continued:—]

"It is neither necessary, nor would it be possible for me to enumerate what these important improvements have been, nor how great has been the progress in professional knowledge and skill. It is more important for us, at the close of this period of nearly thirty years, to examine the present position and to look forward to the future. The subjects of education which were enumerated then have become in the course of thirty years so extended, so comprehensive, and so sub-divided by specialities, that the necessary knowledge which could be obtained without very great difficulty at the beginning of that period has now become extremely difficult to acquire. This is one of the grounds that justify our esteemed friend and colleague, Mr. Teale, in advocating "The Need for Reform of the Medical Examination System," whilst our much valued late colleague, Professor Struthers, who took such an active part in the educational matters which were the subject of consideration of the Council, sends us an interesting and instructive communication on "The Medical School of the Future." I may mention at the same time that I have just read an address delivered to the students of the Royal College of Surgeons in Ireland by Mr. Thomson, a colleague who joined us last session—an address which no one can read without regarding it as a valuable and instructive contribution towards the solution of this question. The subject is one of the greatest importance and difficulty; I mean the determination first of the method by which the knowledge required for the practice of his profession can be conveyed to the student or acquired by him; and secondly, a method of examination by which to discover how much information and knowledge the student has acquired, and how far he is capable of making it available. This subject is one which cannot be taken up in a hurry; it will require great deliberation by experienced minds to suggest such changes and improvements as scientific progress demands, and which may secure that the student about to become a practitioner of medicine is more competent for his important and responsible functions. This is the paramount duty imposed on the Council, for the performance of which

its constitution is well adapted, and which it has so well performed. I may here mention that if new duties are to be imposed upon us different from those which we are authorised by law to undertake, this can only be done by Parliamentary legislation. The Council may now look back from the vantage-ground on which it stands to the time when thirty-six months or less were deemed sufficient as a period for acquiring medical education, as compared with the present time, when a period of five years has to be devoted to study, and may also look back to the time when an examination in anatomy and surgery lasting one hour was deemed sufficient to give a candidate a right to be placed on the Medical Register as a qualified practitioner, as compared with the present moment, when examinations extend over several days and comprise all the educational subjects originally decided upon by the Council. They can look back, too, with almost reverence to former members of the Council, among the ablest and most distinguished members of our profession, distinguished alike for their learning, their high character, their desire and their ability to promote the best interests of their profession—men who left their mark, not only on the profession generally, but on our Council, of which they were such distinguished members. The Council are aware that the cycle of visitation and inspection of all the final examinations of the qualifying authorities has been completed, and if this visitation and inspection is to be continued fresh arrangements will have now to be made for the purpose. I cannot mention this subject without mentioning the name of Dr. Duffey, who has acted as Inspector since April, 1892, greatly to the satisfaction of the Council. No higher compliments can be paid to our choice of Dr. Duffey as the Inspector than his election as President of the Medical Section of the British Association at the meeting this year in Carlisle, and the fact of his now holding the very elevated position of President of the Royal College of Physicians of Ireland. At the same time I would call the attention of the Council to the valuable services which the chairman and members of the Education and Examination Committees have rendered in bringing to a conclusion the results of this visitation."

[The PRESIDENT concluded by a reference to the Pharmacopœia Committee, the Finance Committee, and the Dental Education and Examination Committee.]

Mr. WHEELHOUSE moved that the President be thanked for his address and that the address be entered in the minutes. He thought the Council were specially indebted to the President for what he had said about the changes in medical education and examination. He himself could remember the time when it was thought no hardship to spend eight years in study, although, of course, the study was differently distributed from what it was at the present time.

Sir WILLIAM TURNER seconded the motion, and it was cordially adopted by the Council.

Question of Urgency.

Dr. GLOVER said he wished to raise a point of order. He had framed a resolution which dealt with questions affecting the uses and reputation of the Council, and claimed that it should be dealt with as a matter of urgency, and be found that the Executive Committee had thought fit to put it off until Saturday. He wished to know whether the executive committee had power to do this.

The PRESIDENT said it was the duty of the Executive Committee to arrange the order of business, and they had put down the resolution of Dr. Glover for the earliest possible day.

Dr. BRUCE said he quite agreed that the Executive Committee should arrange business for the first day of the session, but he thought that the business on subsequent days should be left to the Business Committee. The President pointed out that it was necessary to arrange the business well in advance.

Sir WILLIAM TURNER also pointed out that all the members of the Business Committee were on the Executive Committee.

Service Examinations.

The usual tables showing the results of these examinations were presented and ordered to be entered on the minutes.

Sir DYCE DUCKWORTH said that the Director-General of the Navy sent no facts as to deficiencies in spelling, general knowledge, and power of expression. As the Council knew, they were exceedingly anxious to be informed upon these points, because such failures as these represented the defects in general education, which unfortunately appertain to many persons who possess diplomas, he thought the Director-General should be asked to make a return on this subject in the future.

Dr. BATTY TUKE said that this request might be quite unnecessary because no deficiencies in this respect might exist.

The Election of Direct Representatives.

Dr. GLOVER moved: "That it be referred to a sub-committee to advise as to the best means of making the Register and minutes more available for use on short notice." He was at the present moment fighting for his existence as a member of this Council, and one of the means for the preservation of that existence was a good knowledge of recent registrations, and it had surprised him to find that it was the most difficult thing in the world to get at the registrations of the present year. He had had to wait for them for a long time, and when they were produced gradually and slowly they were found to be incorporated with the rest of the Register, and could only be picked out with great difficulty. As to the indexes of the minutes he had found them not nearly so helpful as he could have wished.

Dr. BATTY TUKE seconded the motion.

Dr. BRUCE, speaking as a direct representative, said he had experienced great difficulty in getting at the new registrations.

The PRESIDENT pointed out that the Register was designed to enable the public to distinguish between qualified and unqualified practitioners, and not to further the interests of candidates for the direct representation. The book was published by the Stationery Department of the Government, and this Council was not responsible for the printing.

The CLERK (Mr. W. J. C. Miller), replying to questions by Dr. Heron Watson, said the returns of new registrations were sent out twice a month to the Scotch and Irish branch registrars. As to the indexing of the minutes, the plan adopted was the work of the chairman of the Index Society, who might be taken as an authority on the subject. If there was to be a separate list of new registrations there would require to be a considerable payment.

Dr. GLOVER said it was only a case of printing about 1000 names, which would not cost more than 30*s*.

Sir WALTER FOSTER thought that every facility should be given to candidates in this connexion.

After some further discussion the motion was agreed to, and Dr. Thorne Thorne, Mr. Teale, Dr. Thomson, and Dr. Glover were appointed to the sub-committee.

Procedure in Penal Cases.

Mr. WHEELHOUSE, on behalf of the Executive Committee, presented and moved the adoption of certain new standing orders with reference to the procedure in penal cases. One of these was to this effect, viz.:—

"The General Registrar shall make an abstract of every such complaint as is mentioned in the last preceding paragraph, and shall submit such abstract to the President, and shall enter the same as, and when, approved by the President in a book to be kept by the General Registrar for the purpose. The complaint and the said abstract, and the documents which accompany the complaint, shall be submitted by the General Registrar to the President, who, if the case be considered by him to be outside the jurisdiction of the General Council, may direct the General Registrar to signify the same to the applicant, but who, if the case in his opinion may come within such jurisdiction, shall direct the General Registrar to refer the case to the solicitor with instructions to make further inquiries, either through a Branch Council or otherwise, and to take counsel's opinion if necessary, and to prepare and report upon the case."

Dr. BRUCE moved that the whole matter be referred back to the Executive Committee for further consideration. It seemed to him, he said, that questions of professional misconduct should be considered not by lawyers but by members of the Council. They were questions which affected the profession, and they should not be filtered through the solicitors before they were considered by the Council or the Penal Committee. His opinion was clear that when an accusation was brought against a member of the medical profession whose name was on the Register the appeal should be to his peers, and that as soon as the complaint was lodged it should be laid before a strong Penal Committee. He did not think it should be left to the President or to any individual to say whether or not a case should proceed. There was no hurry at all in these matters, and there was no reason why they should not be deliberately considered by the Penal Committee.

Dr. PETTIGREW seconded the amendment. He felt strongly, he said, that no individual, however experienced

and versed in these matters, should have the power proposed in the new standing orders, and he did not think it was fair to place this great responsibility on the President. The President might not have the means of getting all the information that was necessary; he might be called upon to act upon side issues. Now he took it that these matters could not be made too public. He thought the profession would feel more secure if they had the Penal Committee to act in these cases first and the Council afterwards. He took it that there was no more important function discharged by the Council than the keeping pure of the Register. They were all very jealous of the honour of the profession, but, at the same time, they were all resolved to be strictly honourable and equitable in everything said and done, and he for one should deprecate any standing order that would convey even indirectly the impression that things might be done in a hole-and-corner manner. He thought all these things should be taken up in a public spirit and dealt with in that way, and he considered that in the first instance the complaints should go before the Penal Committee.

Mr. BRUDENELL CARTER said that all he saw was this, that the President had power to stop a case if it was outside the jurisdiction of the Council. The Penal Committee could not always be called together at a minute's notice, and, as it seemed to him, the power to say a case was outside the jurisdiction of the Council was not one that was likely to be abused or would be difficult to exercise. In a case obviously outside the jurisdiction it would be rather a hardship on the person in respect to whom a complaint was made to wait for a meeting of the committee.

Dr. MACALISTER considered that the power went further than Mr. Carter suggested. The proposed form of the standing order had it that if the Penal Committee resolved that the case was one in which an inquiry ought to be held, "the President may, if he so thinks fit, direct the solicitor to take steps for the institution of an inquiry," &c. If that meant anything it meant that the President might agree with the committee, and if that were so there was something in the objections which had been made.

Dr. GLOVER supported the proposal that the matter should be referred back to the committee. He thought with Dr. Pettigrew that the President should be relieved of the responsibility of deciding. The sooner complaints of misconduct reached the Penal Committee the better, and it was his intention to move during this session that that committee should meet much more frequently than it did at present. Under their existing system they were going on an utterly wrong track, and the more frequent meeting of the committee, with a better definition of its powers, would be an improvement. If the Council passed the standing order in the form in which it was now presented they would simply be perpetuating the existing state of things.

The PRESIDENT, while thanking Dr. Glover for his desire to relieve him of responsibility, said he had always avoided the responsibility of acting where he could. But there were cases that ought obviously to be dealt with at once—such, for example, as a letter complaining of "A. B." having been drunk or disorderly; but the more the Council relieved him the better should he be pleased.

Sir WALTER FOSTER, who believed that he was responsible for the creation of the Penal Committee, said he quite recognised the difficulty of the position in which the President was sometimes placed. That gentleman was naturally anxious not to do anything without legal sanction, and he (Sir Walter) thought the President right in sheltering himself as far as possible behind legal advice. It was perfectly obvious to everyone at the table that the President would be perfectly right in dismissing such a trivial case as the one mentioned, but he felt that the difficulty, the great fault, of their procedure was this, that a complaint of a grave character might be made against a professional man, and that that complaint might be—under the present circumstances, was—judged before it came before the General Council at all. When there was a complaint that came within the four corners of the Act it ought to come before the Council before it was seen by the lawyers at all. The by-law before them did not provide in the first instance for an inquiry by the members of the Penal Committee, and if a division was taken he should support the proposal to refer the matter back to committee. The Council had much to thank their President and legal advisers for, but he thought the sub-committee of the Penal Committee should work in the first instance and should approach the lawyers only when they had decided that the offence was one which affected the honour of the profession. In that way he thought that they would do the work better than in the past.

On the suggestion of Sir WM. TURNER, Dr. BRUCE altered his proposal to have the whole matter sent back.

The PRESIDENT, on rising to put the question, remarked that although no penal cases came from Scotland, the amendment was proposed and seconded by Scotch representatives. Their Scotch friends took great interest in this subject, and the rest of the Council were very well looked after by them.

The amendment was adopted.

Disciplinary Powers of Qualifying Medical Authorities.

The Council proceeded to consider communications referred to the General Council by the Executive Committee received from (*a*) universities and other bodies concerned; (*b*) the Scottish Universities Commissioners; and (*c*) the Privy Council, with regard to the report on the disciplinary powers of the qualifying medical authorities, forwarded by the registrar pursuant to a resolution of the General Council passed last June. These communications appeared on the agenda paper. That from the Durham University was simply a letter of acknowledgment. The authorities of the Victoria University intimated that they were making inquiries on the subject. The reply from the University of Edinburgh was:—

"This University cannot obtain the penal and disciplinary powers referred to by application to the Privy Council, as the Medical Council propose, and that the Court have further resolved that no action be taken in the meantime to obtain such powers either from the Universities Commission or by statute."

On behalf of the University of Glasgow the following was the opinion expressed:—

"The Committee recognise serious and, indeed, insurmountable difficulties in the way of the University attempting itself to summon before it unworthy graduates and to deal with their cases. Neither of the existing authorities of the University—Court or Senate—is of such a character that it could act as a tribunal for taking evidence and adjudicating upon cases of misconduct on the part of graduates in all regions of the world, especially if the outcome of such investigation might be the degradation of the offenders and the removal of their names from the roll of graduates of the University. The difficulty will be recognised as specially great when one reflects that if any such course were adopted in the case of medical graduates it must also in consistency be followed in the case of graduates in theology, science, and law. But notwithstanding that all these difficulties are recognised and admitted, it appears to the committee that it would be inadvisable to meet the desire expressed on all hands that the Universities should acquire further powers in this respect by a simple *non possumus*. A reply may safely be sent to the President's letter pointing out the insuperable difficulties above referred to, but expressing the anxious desire of the University to acquire from the Legislature the power to cancel, if it see fit, either temporarily or for all time, the degree of any graduate of the University who has been convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence. Cases in which a medical graduate's name has been erased from the Medical Register, after being adjudged by the General Medical Council to be guilty of infamous conduct in a professional respect, present greater difficulty. If, however, a clause could be inserted into the Medical Act or into any future Medical Act, providing that all the diplomas of a medical practitioner whose name has been erased from the Medical Register shall be withdrawn and withheld from him by the licensing bodies who originally granted them so long as his name remains off the Register, the difficulty might be got over."

The University of Aberdeen stated:—

"In November, 1894, the Senatus, supported by the University Court, presented a memorial to the Scottish Universities Commissioners with the object of obtaining the desired powers for dealing with misconduct on the part of graduates of the University, and the Senatus has now resolved again to approach the Commissioners on the same subject."

The reply of the Royal University of Ireland was also a simple letter of acknowledgment. The Apothecaries' Society of London wrote:—

"The disciplinary powers of the society having been conferred by Acts of Parliament, it would be useless further to make any application to the Privy Council on such a subject (the Privy Council only dealing with chartered bodies). They believe it to be impossible for them in the present state of things in Parliament to get any Bill through the House of Commons. If, however, there should be any chance of doing so, they would, when seeking for further powers, endeavour to obtain that of being able to cancel the diploma of a licentiate."

From the Apothecaries' Hall of Dublin the reply was a simple acknowledgment of receipt.

The Secretary of the Scottish Universities Commissioners wrote as follows:—

"The matter was considered by my Commissioners some time ago at the request of the University of Aberdeen. They were, however, of opinion that if the Universities did not already possess the power of depriving graduates of their degrees, the Commission had no authority to confer that power. They, therefore, decided to take no action in the matter. The proposal that the Commission should support before the Privy Council a recommendation that the disciplinary powers of the Scottish Universities should be strengthened in the direction referred

to in the report has now been carefully considered by my Commissioners. They are of opinion, however, that it is not their province to move the Privy Council with regard to matters which do not fall directly within their powers."

The communication from the Privy Council was as follows:—

"Privy Council Office, Whitehall, July 7th, 1896.

"SIR,—Referring to your letter of the 3rd instant on the subject of a recommendation of the General Medical Council that means should be adopted by the Privy Council whereby the disciplinary powers of the various medical licensing bodies might be strengthened, I am directed by the Lords of the Council to state, for the information of the General Medical Council, that their lordships would be prepared to consider applications from the chartered medical bodies for supplemental charters granting disciplinary powers similar to those conferred upon the University of Cambridge by the statute approved by Her Majesty in Council on 13th May last. The other licensing bodies could, if they should think fit, proceed by statute, or, in the case of the Scotch Universities, by ordinance.

"I am, Sir, your obedient servant,

"C. L. PEEL."

Dr. PETTIGREW said that the University of St. Andrews had received the report in question and were dealing with it. He was sorry that an answer had not been returned. At the last meeting a committee had been appointed to consider the report and consult with the other Scottish universities.

Dr. PHILIPSON mentioned that the report was being considered by the University of Durham.

Dr. GLOVER, who stated that the action of the Council on this matter had been taken at his suggestion, moved that the subject be again referred to the sub-committee of the executive committee who had already dealt with it and to whom he was much obliged for the work they had done. He thought the Council might consider that the matter was in the fair way of being satisfactorily arranged. He thought the letter from the Privy Council a most important one, as showing that the Council had the sympathy and would have the assistance of that body. As their communication showed the Scottish Universities Commissioners did not think it their duty to move in this matter.

Sir WILLIAM TURNER said they had been advised by a very high legal authority that the only way in which to bring about such a change in connexion with the Scottish University system was by Act of Parliament. The Council would observe that the Scottish Universities Commissioners told them plainly that it was not within their powers to make the change. Any further appeal to them would, therefore, be quite useless. They could not do it. As to the other question, that the universities should go to the Privy Council and ask for change in their charter, that might do in the case of the English universities. It would not do in the case of the Scottish universities, for these were regulated by Act of Parliament, and they could not assume powers that the Acts of Parliament did not give them.

Mr. BRUDENELL CARTER pointed out that the Privy Council thought that the change could be brought about in the Scottish universities by an ordinance.

Sir W. TURNER said it was quite obvious that the Clerk to the Privy Council thought that the Scottish Universities Commission Act gave greater power than it did give. In this case the Council must take the word of the Commissioners.

Dr. PETTIGREW did not believe that his University (St. Andrews) had the power to take away a degree in medicine. If that power existed it would apply to arts and divinity as much as to medicine.

Sir DYCE DUCKWORTH said there ought to be a clear understanding that a degree in medicine was a State qualification to practise. That being so, the case was one in which the State could interfere.

Dr. GAIRDNER said that the matter was clearly and fully considered by the Commtitee of the Glasgow University Court, and he could not help thinking that even after all the discussion that had taken place, if anything was to be done, or an Act of Parliament was to be applied for the considerations set forth in the Glasgow University minute must come upon the carpet. They had expressed the possible limitations that most men would consider expedient.

Dr. HERON WATSON, as one of the Commissioners, expressed the view that while there could be no doubt that power was granted to the Scottish Universities' Commissioners to take this matter into consideration, no ordinance bringing about the proposed change could be passed by them. The matter was a very complicated one, and the Council should be well informed upon it before arriving at any conclusion.

Mr. TEALE was not of opinion that no plan could be devised to meet the case. They were in a difficulty in replacing a person whom they had deprived of qualification, but if there existed some power of suspension that would imply power to reconstitute.

Dr. MCVAIL was glad Mr. Teale had brought this view before the Council, as temporary suspension was believed in Glasgow to be that which would afford the best solution of the difficulty. If the committee of the Council dealing with the subject should adopt this solution, or some modification of it, their decision could be sent to the Government with a request for a short Act.

Dr. LEECH was quite sure that this would be the best plan.

The PRESIDENT asked, Why should not the four Scottish Universities meet amongst themselves, and arrange for an Act of Parliament? The present state of things could not be allowed to go on, for it was a fraud on the public.

Dr. GLOVER'S motion was agreed to.

Midwifery Practice.

Mr. WHEELHOUSE moved to receive and enter on the minutes communications from the licensing bodies in regard to the following resolutions:—

"(1) That in regard to the midwifery practice to be required of candidates for licences to practise, it is desirable that the alternative to three months' attendance on the in-door practice of a lying-in hospital be in future defined as follows: 'Or to have been present at not less than twenty labours, at least five of which shall have been conducted throughout under the direct supervision of a registered practitioner.'"

The Royal College of Physicians of London and Roya College of Surgeons of England intimated that the resolution would be considered by the Conjoint Board. The University of Cambridge stated that their Special Board for Medicine had agreed to alter the form of certificate of attendance on midwifery cases in the manner desired by the Council. The Royal College of Surgeons in Ireland intimated that "this College does not recognise the certificates of general practitioners, and requires attendance on at least thirty cases in a maternity Hospital, and that the College sees no reason to reduce this standard." The Conjoint Board of the Royal Colleges of Physicians and Surgeons, Ireland, observed "with regret that the requirements of the General Medical Council are very much below those of the Irish Colleges, and would respectfully suggest that the standard for all licensing bodies be raised to something approaching that required here (thirty cases)."

Mr. TEALE remarked that the twenty labour cases were put as an alternative to three months' attendance, and expressed the opinion that it was not the intention that these twenty cases should be taken in a fortnight, as in some places it was quite possible they could be.

Dr. ATTHILL said it was possible, if permissible, to take twenty cases in a week in the Dublin Rotunda Hospital.

The motion was agreed to.

The Council then adjourned.

WEDNESDAY, NOV. 25TH.

The Council resumed its work to-day, Sir RICHARD QUAIN presiding.

Preliminary Examinations.

Dr. BATTY TUKE, Chairman of the Education Committee, presented a report of that body on the motion passed in June last to this effect:—

"That the Education Committee be requested to consider whether the time has not come for erasing from the list of recognised preliminary examinations the 'Examination for a Second-class Certificate (of First or Second Division) of the College of Preceptors.'"

This motion, he said, had been under the very careful consideration of the committee, and they had come unanimously to the conclusion that they could not recommend the adoption of the proposal it contained. The existing regulations had only been in force since 1892, and it had been the custom of the Council to allow some time before judging their effect. Besides they had reason to believe that there had been a certain amount of improvement in the general standard of preliminary examination. They found on examining the tables with reference to the subject that whereas in 1889 the number of rejections amounted to 36 per cent., they had during the past year amounted to 44 per cent. Besides, they had the negative evidence that during the last few years no reports had been received from the licensing bodies, or indications of imperfect education. He did not place very much reliance

on this, but they might take it for what it was worth. Moreover, in all cases where the Council had proposed anything like a serious change in any of its regulations, it had always given ample time so that young persons preparing for the preliminary or other examinations should have due notice. The main objection, however, was that the motion only referred to one examination. It did not take into account the analogous examinations conducted by the Educational Institute of Scotland, the lower grade examination of the Scotch Education Department, the junior examinations of the Intermediate Education Board of Ireland, the preliminary examination conducted by the Royal Colleges of Physicians and Surgeons of Ireland, or the junior local examinations conducted by the various universities. In the opinion of the committee it would be inexpedient to make more stringent the conditions applicable to one of the recognised examinations without imposing the same restriction on the other examinations of the same grade. If such a restriction was to be enforced it should be made applicable to all the corresponding examinations, otherwise its operation would simply be to induce candidates to resort to the less exacting examining bodies. The preliminary examinations now accepted by the Council for the purpose of registration might be roughly divided into the following two groups: (1) senior examinations intended for pupils leaving school above the age of sixteen; and (2) junior examinations for pupils leaving school at or below the age of sixteen. Were the senior class of examinations alone recognised it would, with a subsequent five years' curriculum, render twenty-two years the earliest age at which a qualification could, in the very large majority of cases, be obtained; and if the large proportion of rejections in preliminary examinations was regarded, along with the large percentage of rejections in professional examinations, the strong probability was that about one-half of all candidates could not become qualified before the age of twenty-three or twenty-four years. Though such a general raising of the standard might be considered advisable in itself, it was manifest that in fairness to young men and women who were now preparing to enter on a course of medical study, it could not be introduced without ample notice. The committee were, therefore, of opinion that it was inexpedient at the present time to make an isolated change in the requirements such as that suggested in the Council's resolution. The committee, however, noted that the College of Preceptors passed candidates who attain a percentage of 36·7 of the marks for the ordinary certificate examination and of 39 per cent. for the special medical students' examination, and that the Educational Institute of Scotland pass candidates at 45·5 per cent. They were of opinion that this percentage might with advantage be raised, and recommended that the Council represent, not only to these institutions, but to all examining bodies whose junior examinations were accepted for registration, that the Council desired that the pass requirements in these examinations should gradually be increased. The committee believed that such a gradual increase of stringency was all that would be warranted under existing circumstances. The time, however, appeared to have come when the whole subject of preliminary examinations should be re-considered. They recognised that the object of the resolution on which this report was founded was doubtless to raise the standard all over the country. Whilst warmly sympathising with this object the committee had felt it to be their duty to place certain considerations before the Council which might possibly influence its decision. Any immediate and material raising of the standard of preliminary examination would exercise an important influence over the whole system of medical education and examination. The question was too important to be decided without prolonged study and consideration, and this the committee were prepared to give it should the Council so direct. They accordingly recommended that the Council instruct the Education Committee to formulate a scheme which, as approved or amended by the Council, might become applicable on Jan. 1st, 1900. The report of the committee would be presented to the Council at the November meeting of 1897. The recommendations of the Committee were:—

"1. That the Council should represent to all bodies whose junior examinations in general education are recognised, that it desires that the stringency of the pass requirements in these examinations should gradually be increased.

"2. That the Council instruct the committee to consider the requirements of the several Junior Preliminary Examinations now recognised by the Council, and to report on the steps that may be necessary for enforcing a higher and more uniform standard therein; that the recommendations which the committee may propose with this object be brought before the Council at the November Session of 1897, in order that if approved they may be brought into force on Jan. 1, 1900."

Dr. Batty Tuke explained that the information at the command of the Council as to the percentage of pass marks was very imperfect, the larger proportion of the bodies not sending in any returns, but if they took the College of Preceptors as an example they would see that the stop mark was not quite satisfactory. The second recommendation of the committee was of a far-reaching character and calculated to have an important influence on the whole system of medical education and examination. The committee had reason to believe that the measure adopted by the Council some years ago of raising the medical curriculum from four to five years had already had a great influence in reducing the number of medical students and he believed that if a higher standard of preliminary education were established the effect in that direction would be even greater. Against that, however, they might put the consideration that probably if a man could pass the higher standard in preliminary education he would be better able to learn than a man who could only pass the lower standard, and there would be a lower percentage of rejections in the professional examinations. It might be said that this would increase the expense of medical education, but it should be borne in mind that at the present moment the expense of medical education was less than that of any other liberal profession. He thought it right to put these considerations before the Council, but he would say that, in his opinion, if the Council passed a measure which raised generally the standard of preliminary education and, as a direct consequence, the status and tone of the medical profession, it would be doing a duty to the body which it was its prime duty to protect, and that was the general public. He begged to move the adoption of the first recommendation of the committee.

Dr. MACALISTER seconded this motion.

Mr. BRYANT, speaking as the mover of the motion referred to the committee, said he was slightly disappointed that the committee should not have seen their way to urge upon the College of Preceptors the necessity of raising the standard of the preliminary examination for medical students; but he was prepared to accept the explanation of the chairman of the committee and to acquiesce in the two recommendations. Perhaps it would be better to leave it to the committee to work out the problem how best preliminary education all over the country could be improved.

Sir WILLIAM TURNER pointed out that the Council had no right to interfere with the examinations except in so far as they concerned the medical profession, and many of these examinations did not concern the medical profession. As to another point, it was quite within the competency of such a body as Mr. Bryant represented to decline to recognise the certificate of an examination to which it objected. In that way it could exercise very much greater pressure than could be exercised by sending down a resolution of this Council.

Mr. CARTER said that it would always be in the power of the Council to decline to recognise the examination of a body whose standard did not come up to that prescribed by the Council.

Dr. MACALISTER, speaking as a member of the Local Examinations Syndicate at Cambridge, said that they fully recognised the right of this Council to say on what conditions they would receive the certificates of the examination, and they distinctly intimated to candidates for the medical profession that they must pass in certain subjects. They recognised that a special standard was required in the case of medical students. He therefore saw no technical difficulty in the matter.

Dr. THORNE THORNE said he shared with Mr. Bryant a good deal of disappointment in connexion with this matter. He did not for a moment mean to say that the committee were not justified in their action but he felt it so imperative that the education of men entering the medical profession should be raised, that anything which in any way was antagonistic to that, was met in his mind with a feeling of the greatest disappointment. The Chairman of the committee had told them of all sorts of things that might happen if they took this step. He told them that there might be a diminution in the number of men on the Medical Register. He sincerely hoped that it would come soon because the complaints of men in search of occupation were appalling, and the medical profession was grossly overstocked. He was

absolutely of opinion that the higher they raised the educational standard of the profession the more likely were they to get a higher grade of men and to rid themselves of the complaints of unprofessional conduct, which occupied so much of the time of this Council. At the present moment in hospitals they had actually to hold classes in order to give men an ordinary schoolboy's education. As to what Sir William Turner had said, this was a question of medical education and ought to be boldly faced by this Council and not left to the licensing bodies.

Sir WILLIAM TURNER said he had no thought of the Council divesting itself of any of its authority in this connexion.

Dr. GLOVER said he was very anxious to dispel the gloom which appeared to have overtaken Dr. Thorne Thorne. He entirely misunderstood the feelings and the views and the intentions of the Education Committee. They were entirely at one with him in being anxious to improve the standard of preliminary education and being anxious to do that as quickly as possible. All that Dr. Tuke contended for was that they must have time to make the improvement. It must be remembered that the Council were not permitted to use this examination as a way to exclude men from the profession. That would be a use of their powers entirely unwise, unjustifiable, and indiscreet; but they were entitled, and it was their duty, to insist upon, such an examination as would make medical education more real and effective, and he believed this was the sole wish of the Education Committee, and if it could be accomplished by 1900 it would, in his opinion, be an admirable piece of work.

Dr. ATTHILL spoke strongly in favour of raising the standard of preliminary education.

Mr. THOMSON said that his idea would be to have a central board of examiners who would set papers for all parts of the kingdom and who would hold an examination on the same day in all parts of the kingdom. In this way they would secure an equal standard and equal treatment.

Dr. BATTY TUKE said he regretted very much that Dr. Thorne Thorne had misunderstood the tenor of his remarks. The committee had thought it right to point out the possible eventualities of the proposed step, but what they put forward must not be considered as in the nature of objections. Their desire was to raise the standard of preliminary examination, which they considered would be for the benefit of the public and the profession. No doubt Mr. Thomson's plan was the ideal one. It would simplify things very much if this Council had an examination board of its own, but, unfortunately, the Council had no power to institute such a board.

The first recommendation of the committee was then put to the Council and carried unanimously.

Dr. THORNE THORNE, speaking to the second recommendation, said he saw no reason why the new scheme should not come into operation until 1900. If this interval were allowed there would be an inrush of ill-educated boys such as would stamp the profession for the next quarter of a century. He begged to move that the recommendation be amended so as to read that the new scheme come into operation at the earliest practical opportunity.

This amendment was accepted by Dr. Batty Tuke, and the recommendation thus altered was adopted by the Council.

Mr. THOMSON had on the programme of business a motion to this effect, which, in view of the discussion that had taken place, he withdrew—viz.:

"That the course in general education prescribed for students seeking admission to the medical profession is inadequate, and that it be referred to the Education Committee to report to the next meeting of the Council in what manner the standard may be raised and greater uniformity of tests be secured."

Dr. BATTY TUKE presented a report by the Education Committee with regard to the preliminary examination of the Royal Colleges of Physicians and Surgeons in Ireland, in which the committee recommended the Council to urge on the Royal Colleges the necessity of making further efforts to arrange with educational institutions for the conduct of the examination. Several of the Irish representatives claimed that this could not be done, but the Council adopted the report and the recommendation.

Examinations of the Irish Conjoint Board.

Sir DYCE DUCKWORTH submitted reports by the Examination Committee on the fifth and sixth inspections of the examinations of the Conjoint Board of the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Dublin. The first of the two took place in May last and the second in July. These examinations, Sir DYCE said, were somewhat peculiar. They were permitted by the General Council and were necessary because a certain number of candidates, who had begun their studies under the Conjoint Board, had, if possible, to complete their examinations. These examinations were held at intervals, for three or two candidates, or, perhaps, only one candidate, and in the circumstances it was very difficult for the Council's visitor and inspector to form a fair estimate of the examinations of the board. The committee's report on the fifth examination was as follows:—

"At the examination in May, 1896, three candidates were examined One had been rejected previously twice, another three times, and the third four times in one or more subjects. No candidate passed on this occasion the entire examination. In clinical surgery no special supervision was exercised over the candidates while taking these notes; otherwise the examination is reported as satisfactory. The same candidate who was passed in clinical medicine in May, 1895, contrary to the judgment of the Visitor and Inspector, submitted himself voluntarily to re-examination in this subject, and was awarded a passing mark. On this occasion the Visitor and Inspector formed the same opinion of him, and noted his ignorance of clinical medicine. The other candidate was rejected for gross ignorance. In the examination on operative surgery one examiner was forty minutes late in attendance. In the midwifery examination no instruments were shown and no questions were put on the subject of gynæcology. The phantom was not used. In the examination on forensic medicine and hygiene no specimens, tests, diagrams, or models were employed. The Visitor and Inspector report that this examination was 'sufficient,' but they state that there is still room for improvement. They, however, observe that 'at the oral examination no questions were given on gynæcology to one of the candidates with the exception of his being asked the uses of the sound and of Sims' speculum. No other instruments and no specimens were exhibited: and although there was a phantom on the table, no use was made of it. This is the fourth occasion on which attention has been called in these reports to similar deficiencies in the practical character of this examination. In forensic medicine and hygiene the recommendation of the Committee of Management that the examiners in these subjects should freely use "specimens, tests, diagrams, and models" at the oral examination was on the present occasion also completely disregarded. Having regard to these statements the Examination Committee has to report that it is still dissatisfied with this examination."

The committee's report on the sixth examination was this:—

"The report of the Visitor and pro-Inspector on the final examination (sixth) of this board in July, 1896, is that it was 'sufficient' and satisfactorily carried out. The clinical examinations in medicine and in the different parts of the division of surgery are reported as satisfactory and adequate. The Examination Committee has to offer the following comments on this report. In the written examination in medicine the character of the paper set was considered too extensive to be dealt with in the allotted time. The methods of examination in clinical surgery are reported as very thorough and worthy of commendation. In the examination in operative surgery it is to be noted that while one examiner awarded fifty marks the other only gave twenty marks for the same subject, the Visitor and pro-Inspector agreeing with the higher marking. The single candidate examined in clinical medicine was passed, but the visitor and pro-Inspector did not consider him entitled to pass as he was ignorant of subjects of fundamental importance. The arrangements for the examination of urine were unsatisfactory. The Examination Committee is of opinion that the examinations, as conducted by this board, although improved in many respects since the earlier inspections, are in the awarding of marks unsatisfactory and not yet worthy of the entire confidence of the General Medical Council."

Continuing, Sir DYCE DUCKWORTH said that since the examination in July there had been another examination held, but as the Council had received very short notice of it it was impossible to send a visitor and inspector.

At the request of Members of Council

Sir DYCE DUCKWORTH also read extracts from the visitor and inspector's report on the sixth examination.

Mr. BRYANT having seconded, a motion for the adoption of the reports was agreed to.

The Case of the Dublin Apothecaries' Hall.

The Council then proceeded with the application from the Apothecaries' Hall of Dublin for the appointment of assistant examiners in medicine and surgery.

Sir WILLIAM TURNER thought the Council ought not to put decision on this matter off any further. He moved that a communication from the Royal College of Surgeons in Ireland declining to form a combination with the Apothecaries' Hall of Dublin, a communication from the Hall expressing readiness to join the College of Surgeons in the formation of a combination, and a communication from the Privy Council requesting to be informed of the Council's decision on the Hall's application for examiners, should be received and entered on the minutes.

This having been agreed to

The REGISTRAR read a new application from the Hall as follows:—

"Apothecaries' Hall of Ireland, 40, Mary-street, Dublin.
"Nov. 5th, 1896.

"SIR,—As you are doubtless aware, the question of appointing Assistant Examiners in Surgery for the examinations of the Apothecaries Hall of Ireland came before the Privy Council on Monday, May 11th.

"Towards the close of the argument their Lordships made a suggestion that the Hall should again approach the General Medical Council with a view to the appointment of examiners, not only in Surgery, but in Medicine, and should so place themselves in the hands of the General Council to such an extent as to enable that body to be satisfied that the examinations would be for the future a complete and sufficient test for the purposes of the Act of 1886.

"Their Lordships further intimated that in their opinion the proper course would be for the Hall to submit names of proposed Examiners in Medicine for the General Council to approve, and directed the case to stand over to see whether this would be done.

"The Hall, through their representative, on the 3rd of June made this application—viz., for Examiners in Medicine and Surgery; and after a discussion extending over part of two days, the following resolution was moved by Sir William Turner and agreed to:

"'That the Council defers for the present the expression of an opinion on the application of the Apothecaries' Hall of Ireland for the appointment of Assistant Examiners in Medicine and Surgery, and directs communications to be made to the Apothecaries' Hall and to the Royal College of Surgeons in Ireland with the view to the reconsideration of their respective positions, so that such a combination may be effected between them as may ensure that a sufficient standard of examination shall be maintained by the General Board of Examiners which will be satisfactory to the Medical Council.'

"We have since approached the Royal College of Surgeons in Ireland as regards the possibility of carrying out Sir William Turner's view, but without success, and we are informed that an intimation to that effect has been forwarded to you by the Royal College of Surgeons in Ireland. Under these circumstances we are compelled to renew our application for Examiners in Medicine and Surgery as before.

"So far as Medicine is concerned we suggest for consideration the following gentlemen:—

"James Byrne Coleman, M.B., M.Ch., B.A.O., R.U. Irel., Physician to Jervis-street Hospital;

"E. R. Townsend, M.B.T.C.D., Professor of Medicine to Queen's College, Cork, Physician to Cork Infirmary.

"If the Medical Council should prefer to substitute any Examiners in Medicine for those above named, the Apothecaries' Hall of Ireland will be pleased to defer to their wishes in that respect.

"We further ask that the following gentlemen be appointed by the Council as assistant examiners in surgery:—

"Francis T. Heuston, M.D.R.U.I., F.R.C.S.I., and M.C.R.S.I., Surgeon to the Adelaide Hospital.

"F. Conway Dwyer, M.B., Bac. Surg., T.C.D., Surgeon to Jervis-street Hospital.

"The Apothecaries' Hall of Ireland believed that if the Medical Council will appoint Assistant Examiners in Surgery and Medicine, such Examiners will, with the Examiners to be appointed by the Hall, constitute an Examining Board who will maintain a standard of efficiency satisfactory to the Council.

"I am, Sir,
"Your most obedient servant,
"R. W. JACKSON, Kt.,
"Governor."

"To Sir RICHARD QUAIN, Bart., M.D.,
"President of the General Council
of Medical Education and Registration."

Mr. TICHBORNE moved that the application be agreed to. He made the proposal on the broad ground that it was desirable to perpetuate the Hall which had been called the "poor man's doctor," as a licensing body, and he put it to the Council that they had the means of securing an efficient examination in the only part of it which had been stated to be weak. The authorities of the Hall would maintain a standard that would be satisfactory to the Council in accordance with their promise.

Sir JOHN BANKS, in seconding the motion, said he had thorough confidence in the promise which the Hall made to elevate and maintain a high standard of education. He was acquainted with the men whose names had been proposed. They were men of the highest character and eminence and were well fitted to discharge the duties of examiners.

Dr. MACALISTER moved as an amendment "that this Council, having given its best consideration to the suggestions emanating from Right Honourable Members of the Privy Council and to the application of the Apothecaries' Hall based thereupon, is of opinion that it would not be for the public benefit that the Council should appoint examiners in medicine and surgery to assist at the qualifying examinations held by the corporation, and accordingly declines to accede to the application." He could not consent to a simple direct negative in this instance, because the Council had to frame an answer in such a way as to show the Privy Council that they had given full consideration to the subject from the point of view of the public benefit. As it was, in his view, for the public benefit not to accede to this application this amendment was somewhat different from a direct negative. He did not think it would be wise for this Council to coöperate with the Apothecaries' Hall in raising a new board, as the Hall would do if they agreed to the application. Its examinations in coöperation with the Joint Board had been proved to be inefficient. But if the College of Surgeons, continually on the spot and capable of exercising supervision, were unable to maintain control was it at all likely that the General Medical Council, so far away from Dublin as it was, could expect to do better? Supposing the application were agreed to, the Council's examiners would be no more than assistant-examiners. The governing board of the Apothecaries' Hall would be the controlling body, and that notwithstanding that from the nature of its constitution it was incapable of exercising the necessary control. The governing board of the Hall could not, therefore, ensure to the Council or the public that the examinations, with Council appointments, would be maintained at the proper standard. If the Council appointed these assistant examiners they were practically giving up their power of inspection. That would be a very inefficient substitute for the visitation and inspection the Council now insisted upon. It would be practically impossible for the Council to see whether the examiners they appointed were doing their duty. Then this Dublin Apothecaries' Hall remained the least satisfactory of all the examining bodies of the Kingdom. Supposing, in the event of the application being agreed to, that it again got into disrepute, upon whom would the responsibility fall? The body that would suffer would be the General Medical Council. It would be a public calamity if, after trying to set it up again, they were to see it break down once more. A threat had been held over their heads by one of the medical journals that, if the General Medical Council did not appoint, the Privy Council would insist on appointments being made. He far preferred that alternative to their acceding through craven fear of consequences to a request which he conscientiously believed would not be for the public benefit to grant. Let the Privy Council insist on these examiners being appointed, but if the examinations failed—and because of the nature of the Corporation they were almost certain to fail—the Council could at least report on the inefficiency of the examinations that the Privy Council had created. If the Lords of the Privy Council would take the view that the Hall must get examiners—if they did so, not for professional reasons, but for reasons of high policy—their lordships ought to take the responsibility and not throw it upon the General Medical Council. In the interests of this Council, of the profession, and of the public it was extremely undesirable to accede to the application.

Mr. TICHBORNE: As regards the body I represent, they would be very sorry to be under the Privy Council.

The PRESIDENT pointed out that Clause 5 not 4 of the Act must be their guide in this case. That clause empowered the Council if they thought fit to appoint assistant-examiners.

Sir WM. TURNER said that "if they think fit" was construed by their counsel to mean that they had absolute discretion.

Mr. FARRAR, solicitor, said that the Act suggested a course that they might take.

The PRESIDENT remarked that the section also provided that if the Council did not act the Privy Council might give their opinion to the General Medical Council and the latter might then give effect to such directions.

Dr. MACALISTER: That is that they should appoint.

The PRESIDENT: I should like to say let us have a plain broad refusal.

Mr. TEALE: If the President moves that I shall second.

The PRESIDENT: I cannot do that.

Sir WALTER FOSTER, in supporting the application, thought that the Dublin Apothecaries' Hall should be treated as the Council some years ago treated the Apothecaries' Society of London, when the Society, unable to form a combination, had their application for the appointment of examiners acceded to. Although there had been failure of the dual system of examination the Dublin Hall was concerned with, they should now have an opportunity of standing alone like the London Society. Let them treat the Hall with perfect fairness as a body making an original application under the Act of 1886. That Act did not attempt to stamp out such bodies. It had preserved everyone of them. Let them appoint the examiners asked for, and if the Hall then failed the Council, at any rate, would have done its duty.

Dr. GAIRDNER reminded the Council that while the only

parallel case to the present was that of the Apothecaries' Society of London the Society on applying for examiners had not applied for examiners in medicine. They had themselves the power to appoint examiners in medicine and those presumably were competent for their work. This was quite different from the case before them. The Dublin Hall applied to the Council in consequence of having been condemned in medicine over and over again. It applied to the Council to furnish them with such examiners as would supplement its own board in the examination in medicine. That was entirely a new departure and to his mind an utterly dangerous departure contrary to the spirit of the Act. While he did not dispute that they had the legal power to appoint examiners in medicine, he yet said that in the highest degree it was inexpedient.

After some remarks by Dr. MCVAIL, a question arose as to whether the Council would suspend standing orders and make an effort to finish this part of their business that night, but there was a majority in favour of adjourning at the usual hour, and it was agreed to continue the debate on Thursday afternoon. In order to have his amendment printed in the new programme of business, Dr. MACALISTER consented to alter it by striking out the words "is of opinion that it would not be for the public benefit." Sir WILLIAM TURNER said these words formed an argument, and it was very objectionable that a resolution should contain an argument.

The Council adjourned.

THURSDAY, NOV. 26TH.

The Council met again to-day, Sir RICHARD QUAIN presiding.

The Case of the Dublin Apothecaries' Hall.

The first business was the further hearing of the application by the Apothecaries' Hall of Dublin for the appointment of assistant examiners in medicine and surgery.

Dr. GLOVER said that his study of the matter had led him to the conclusion that this body had come to the end of its usefulness, and that the application should not be granted.

Mr. THOMSON said that he dissented from the view put forward that the apothecaries were the "poor man's doctors" in Ireland. The real object of this application was to provide a cheaper qualification, and he submitted that it was no business of this Council to encourage competition of this kind.

Mr. TICHBORNE insisted that the Royal College of Surgeons must take its share of the blame in connexion with the conjoint examination, and as to the duty of this Council, if it was not to encourage competition, it was also not to revive monopolies.

The vote was then taken upon Dr. MacAlister's amendment refusing the application, when 23 members voted for it, 2 against it, 4 declined to vote, and one (Sir Walter Foster) was absent. The amendment being put as a substantive motion, was carried by show of hands, and became the finding of the Council. It was decided to communicate the decision to the Privy Council with a covering letter prepared by the Executive Committee setting forth briefly the grounds upon which the decision had been formed.

The Council then proceeded to other business, which will be duly reported in next week's issue.

NURSES AND THE NEW SUPERANNUATION BILL.

A WELL-ATTENDED meeting of matrons of institutions affected by the new Poor-law Superannuation Bill was held on Tuesday last at No. 12, Buckingham-street, to consider the position of infirmary and other nurses in relation to the new Act. Considerable dissatisfaction was expressed at the way the interests of nurses, whose terms of service are so different to those of other officers, had been neglected in the drafting of the Bill, and at the manner in which it had been hastened through the House of Lords after distinct promises had been given that certain modifications should be introduced when it reached that stage. The fear was expressed that it would in process of time injure the cause of good nursing in infirmary and other institutions. We understand that in view of this fact certain of the Metropolitan Boards of Guardians have it in contemplation to petition the Government in favour of some amendments being made in the Act. Our views on this question are already known to our readers.[1] Those interested in the matter should communicate to the Secretary of the Workhouse Infirmary Nursing Association, 4, Adam-street, Strand.

[1] THE LANCET, Oct. 24th, 1896, p. 1182.

SOCIETY FOR PHYSICAL VOICE TRAINING.—A meeting of the executive committee of this society, of which the Duke of Rutland is president, was held on Friday, Nov. 20th, for the purpose of electing an examining board and a staff of lecturers and teachers. There were present Archdeacon Emery and the Rev. H. Hughes (chairman), Dr. Dundas Grant, Mr. Wyatt Wingrave, Mrs. Behnke, Mr. Van Praagh, the Rev. C. R. Taylor, Miss D'Orsey (hon. secretary), and the Rev. W. D. Green (hon. treasurer). The Rev. H. Hughes has promised £50 per annum for three years to promote voice training amongst the clergy. A prospectus may be obtained on applying by letter to the hon. secretary, 11, Chandos-street, Cavendish-square.

THE NOTIFICATION OF MEASLES.—A discussion took place at the last meeting of the Esher district council with regard to the notification of measles. In accordance with the wishes of a committee the medical officer had obtained an expression of opinion from the medical men with the largest practices in the district as to such notification, and the majority were in favour of adopting some means of obtaining control over the epidemic. The committee in its wisdom, however, decided not to recommend any compulsory notification of measles at the present time, the reason being that it would entail considerable expense and trouble, for which the results to be obtained would not compensate the council. Several members spoke against the expense of such cases being sent to the Tolworth isolation hospital, but it was pointed out that this course did not necessarily follow notification, and an amendment against the report was carried by eight votes to seven.

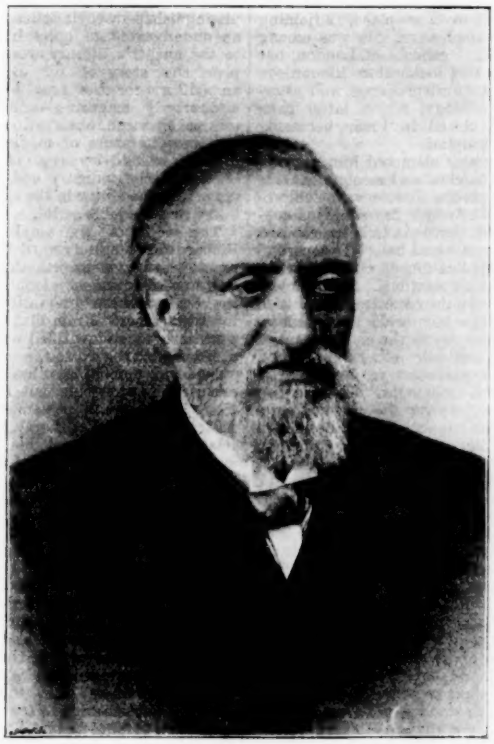
PRESENTATIONS TO MEDICAL PRACTITIONERS.—On the 27th ult. the South-Eastern Lodge of Oddfellows presented Dr. E. Diver of Kenley, Surrey, with a silver-plated entrée-dish with revolving cover, in recognition of his faithful services as medical officer of the lodge for twenty-two years. Also, on the 31st ult., the Board of Management of the Warehousemen, Clerks, and Drapers Schools presented him with a beautifully illuminated address of thanks in an album in testimony of his zeal and of his tenderness towards little children during his service of over sixteen years at the schools. Also, on the 13th inst., the residents of Kenley and Caterham presented him with a silver salver and £160 on his relinquishing his medical practice, covering a period of twenty-nine years.—At a luncheon on the 9th inst., given by his Worship the Mayor of Huddersfield, Dr. J. R. Kaye, medical officer of health to the West Riding county council, was the recipient of an artistically illuminated and handsomely framed address, as a token of appreciation by the council of his official work in that county borough.—At a luncheon given by Alderman J. L. Walker, mayor of Huddersfield, on Monday, Dr. Kaye of Wakefield, medical officer of health to the West Riding County Council, was presented with an illuminated address, which set forth the appreciation entertained by the council of his work in that important county borough.—Mr. Wm. M. Burman, L.R.C.P. Lond., M.R.C.S. Eng., late medical officer of health for Wath, on his leaving and retiring into private life after seventy years he had lived there and the forty-four or forty-five years he had practised in the district, has been the recipient of a sum of £51 5*s.* 6*d.* subscribed by 125 persons.—At the Whittingham Asylum on the 14th inst., Mr. R. A. Daniel, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., assistant medical officer at that institution, received a trio of presentations on the occasion of his leaving—namely, a smoking cabinet from the nurses engaged in the ward, a silver cigarette case from the male attendants, and a beautiful silver-fitted dressing-bag from the general staff, as tokens of high esteem.

Obituary.

SIR BENJAMIN WARD RICHARDSON, M.A., M.D., LL.D. ST. AND., F.R.C.P. LOND., F.R.S., &c.,

PHYSICIAN TO THE LONDON TEMPERANCE HOSPITAL; PRESIDENT OF THE SOCIETY OF SANITARY INSPECTORS; PRESIDENT OF THE MEDICAL TEMPERANCE ASSOCIATION, ETC.

IT is with feelings of genuine regret that the medical profession, both at home and abroad, will receive the news of the death of Sir Benjamin Ward Richardson, which occurred at his residence, 25, Manchester-square, on Saturday morning last. On the Wednesday preceding his death he attended a meeting in the city and seemed in his usual health. In the evening of that day he corrected the proofs of a forthcoming work of an autobiographical character to be entitled "Memories and Ideas." He re-wrote part of the preface of this work and then went upstairs without having expressed any intention of going to bed. As he did not return his son went to look for him and found him upstairs unconscious. At first he showed some signs of rallying and hopes were entertained of his recovery; but on Friday last, when he was seen by Sir Alfred Garrod and other professional friends, it became clear that there was no hope and that he was sinking. He expired at twenty minutes past eight on Saturday morning without having recovered consciousness.



SIR BENJAMIN WARD RICHARDSON, M.D., LL.D. ST. AND., F.R.C.P. LOND., F.R.S., PHYSICIAN TO THE LONDON TEMPERANCE HOSPITAL.

Sir Benjamin Ward Richardson was born on Oct. 31st, 1828, at Somerby, Leicestershire, a village situated close to the Rutlandshire border, where his father, Mr. Benjamin Richardson, had for many years resided. His second name was derived from his mother's family, which had for a very long period been settled in the counties of Leicester and Rutland. His early training by his mother, although she died when he was but a young lad, exerted a permanent influence over his future career. Mrs. Richardson, to whom he ever referred with the greatest affection, destined him for the medical profession, to which many of her relatives belonged, and, in addition to inculcating the strictest principles of religion and honour, she instilled into the boy's mind a love for the study of nature, both animate and inanimate. At an early age young Richardson was placed under the care of a neighbouring clergyman, a man of a wide range of learning, who, himself a naturalist, fostered the boy's growing love for physical and natural science. This gentleman, a Mr. Nutt, entered thoroughly into the project of training young Richardson for the medical profession and took frequent opportunity of supplementing the ordinary classical routine by setting his pupil to tasks whose accomplishment he thought would have a more special bearing upon the lad's future career. At seventeen Richardson's general education ceased, when he possessed the usual stock of knowledge of a lad of his age and position, and in addition the foundations of a scientific training. He had learned to observe and to argue from natural phenomena. In 1855 he was apprenticed to Mr. Henry Hudson, a surgeon practising in Somerby. Again Richardson was fortunate in his superior. Mr. Hudson, like Mr. Nutt, was a scientific enthusiast. His hobby was electrical experimentation, and as he was an ingenious man of considerable mechanical skill he was able to teach his apprentice, a boy with an imaginative and inventive mind, many things which were afterwards of such good service to him as an inventor. Richardson saw all the routine of a general country practice while serving his articles under Mr. Hudson, so that when he went northward to become a student at Anderson's College, Glasgow, he was initiated into the life that lay before him, in addition to being more than usually well equipped for entering upon the purely scientific side of his studies. In addition to the regular lectures at Anderson's College Richardson also attended the lectures of Dr. Robert Knox, the famous Edinburgh anatomist, who, his name having been unjustly introduced into discussion of the Burke and Hare horrors, left Edinburgh and set up a school of anatomy at Glasgow.

In 1847 Richardson fell a victim to a form of remittent fever which was then prevalent in Glasgow, and by the advice of his physician returned to England for the benefit of his health, lest longer stay in Glasgow should give to his affection a chronic character. He now became assistant to a Mr. Thomas Brown, a surgeon residing at Saffron Walden, in Essex, whose two previous assistants, Dr. Forbes Winslow and Dr. Edwin Lankester, had, curiously enough, achieved more than ordinary success. Under Mr. Brown, and later under the brother of his old master, Mr. Hudson of Sowerby, who was at this time practising at Narborough, Richardson continued to work at the practical side of his profession although still unqualified. But he did not neglect his turn for original investigation. The prevalent enthusiasm for microscopical research bit him and in 1849 he came to London that he might get into touch with libraries, scientific appliances, and men able to assuage his thirst for knowledge. He became assistant to Dr. Robert Willis of Barnes, a man of learning and a frequent writer on medical and antiquarian subjects. Dr. Willis was editor for many years of the *Medical Gazette* and through his influence and example Richardson turned his thoughts and hand towards literary work. He became a frequent and voluminous contributor to the *Gazette* and remained so after its amalgamation with the *Medical Times* and when he was also a contributor to our columns.

In 1850 he returned to Glasgow to pass his examinations, becoming a Licentiate of the Faculty of Physicians and Surgeons. Four years later he became a Master of Arts and Doctor of Medicine of the University of St. Andrews and in the same year, 1854, competed for and won the Fothergillian medal for a thesis on "Diseases of the Fœtus in Utero." It was during the preparation of this prize essay that Richardson made the friendship of a man who introduced him into

the literary circles of which for so many years he was a close adherent, his connexion with them being expressed by his honorary appointments of physician to the Newspaper Press Fund and to the Royal Literary Fund. He met Douglas Jerrold, then in the zenith of his popularity, while travelling to and fro from Barnes to the libraries of the British Museum and the Royal College of Surgeons of England for the purpose of consulting various scientific authorities. The meeting influenced Richardson's literary work considerably. Douglas Jerrold became interested in the young man's eagerness, and recognising his bright imagination and conscientious industry, introduced him to a small coterie of literary men whose habit it was at the time to meet weekly at a small club in Covent Garden for conversation and relaxation. Among others with whom Richardson there became acquainted may be mentioned Thackeray, Hepworth Dixon, Mark Lemon, John Doran, and George Cruikshank. With the last he soon became on terms of very close intimacy, and on his deathbed was appointed one of his executors. In 1854 the School of Medicine in Grosvenor-place, adjoining St. George's Hospital, still remained alive. It was among the last of the unattached medical schools of London, but its old age was dignified. To this institution Richardson was appointed lecturer on Medical Jurisprudence, and afterwards, in 1857, lecturer on Physiology, which latter position he held until the school closed in 1865, becoming amalgamated with the adjacent hospital.

In 1865 the subject of anæsthetics attracted him greatly, and he approached it from the chemical and mechanical side as well as the clinical. He invented a double valve chloroform inhaler, many modifications of which have enjoyed considerable success. He made investigations into the reputed action of the smoke of the common "puff ball" (Lycoperdon giganteum) and discovered the application of ether spray for the local abolition of pain in minor operations. His chemical work was chiefly responsible for the introduction into British practice of the use of methylene bichloride as a general anæsthetic; while he also led the way in the employment of amyl chloride, amyl hydride, methylic ether, and butyl chloride among other bodies as producers of insensibility, and of nitrite of amyl as an anti-spasmodic. From certain of the experiments conducted to discover the chemical properties of these bodies Richardson happened upon the idea of the feasibility of producing painless death in the process of slaughtering animals, the practical result of which idea was the lethal chamber for the painless destruction of domestic animals, one of which is now working, we believe, at the Home for Lost Dogs at Battersea. In constructing this chamber his labours—not light, and involving inquiry into, among other things, the maintenance of life in factitious atmospheres and the effect of electricity on the vital powers—received the approval and assistance of the Royal Society for the Prevention of Cruelty to Animals. Few men, indeed, to look forward for a moment, have done more to alleviate the sufferings of the animal kingdom than Sir Benjamin Ward Richardson, both in the matter of inventing means of painlessly disposing of the injured and superfluous and in the reform of the routine of the slaughter-house, although in this latter respect much remains undone yet from sanitary and humanitarian points of view alike. He had in the meantime become a Member of the Royal College of Physicians of London, of which body he was in 1865 elected a Fellow, and in 1873 Croonian Lecturer. During the former year he obtained the Astley Cooper Triennial Prize of £300 for an essay on "The Coagulation of the Blood." The theory he put forward in this thesis he had reason to modify in later years, inasmuch as his contention was that coagulation depended on the giving off of an ammonia from the blood. In an appendix to this essay he gave some very interesting reports of his experiments in the direction of the production of artificial rheumatism and the typical state of the heart in that disease by the introduction of lactic acid into animal bodies. In 1867 he was elected a Fellow of the Royal Society; and in 1868, in recognition of his various contributions to science and medicine, he was presented by 600 scientific and medical men with a microscope and a purse of one thousand guineas.

A project which had long been very dear to him—namely, the establishment of a journal dealing entirely with matters of public health—was realised in 1862. No publisher considered the venture likely to prove a pecuniary success, and it was not until he had obtained some assistance from the Epidemiological Society—a body whose foundation owed much to his efforts—that he was enabled to start the *Journal of Public Health and Sanitary Review*, on the title-page of which publication he placed his well-known aphorism, "National Health is National Wealth." To this journal, which he produced and edited for four years, he contributed some of his best work—notably, a dissertation on the Hygienic Treatment of Pulmonary Consumption. This journal was followed by *The Social Science Review*, an interesting and characteristic publication, which also did not long survive its birth. In the short period of its appearance it contained some of the most notable of Dr. Richardson's literary efforts—notable not so much through intrinsic literary merit as on account of the evidence they bore of his extraordinary versatility and vigorous, capable imagination. Among these were his curious and powerful poem, "The Arsenic Wreath," "Anacaona," "Balthasar's Lament"—a free translation from the Latin—and three plays—namely, "A Day with Cromwell," "The Blacksmith of Antwerp," and the "Mask of Fame." All these, especially the latter, are distinguished by their delicacy of treatment, and possess also an undercurrent of quiet humour, an element ever present to the author's literary work and conversation. To complete the story of Sir Benjamin Ward Richardson as an editor, for the past twelve years he has published a quarterly magazine entitled the *Asclepiad*, a work of original research, observation, and criticism on the science, art, and literature of medicine in its broadest sense. We have often had occasion in these columns to speak very highly of the industry and wide range of knowledge displayed by the editor in the single-handed production of this bulky and readable serial.

The study of the amyls and alcohols which occupied Richardson so closely until 1869, and which resulted in his practical work on anæsthetics, led him to direct his attention to the action of alcohol on the human organism, and the result of these observations was that he became a rigid total abstainer. From that time forward his life and life's work were much identified with the temperance cause. His position with regard to the controversy was briefly this: he considered alcohol a valuable agent in the hands of the experienced physician, but inevitably injurious to the physical and mental powers when taken as a food and destructive to the moral robustness of its victim. In relation to this subject his writings were very voluminous and have been the means of greatly increasing the numerical strength and moral influence of the temperance party. His Cantor lectures on Alcohol before the Society of Arts rank among the standard authorities in support of these tenets.

Richardson was knighted in 1893 in recognition of his eminent services to humanitarian causes; and in addition to the Fellowship of the Royal Society he received the honorary degree of LL.D. of the University of St. Andrews, the Fellowship of the Society of Antiquaries, the membership of the Leopold Carolina Academy of Sciences, and a large number of Continental and American distinctions. His honorary degree from the University of St. Andrews was very apt in its bestowal, for it was chiefly through his extraordinary exertion that the University was permitted to send a representative to the General Medical Council on the formation of that body. The privilege having been obtained, Dr. Richardson, recognising that the graduates of St. Andrews University laboured under certain disabilities which had rendered such an omission possible, and might even endanger representation in the future, set a movement on foot to form a bond of union. With this intention the St. Andrews Graduates Association was constituted, of which body Sir Benjamin Ward Richardson has been re-elected President annually for more than thirty-five years.

We have only space to summarise the work of Sir Benjamin Ward Richardson's busy and useful career. He was a wide, imaginative thinker. He was not only no specialist, but he found the ordinary boundaries of medicine too small for him, and extended his labours until he trespassed upon the realms of the transcendental philosopher, of the educational novelist, of the temperance propagandist, of the sanitary inspector, and of the practical politician. An indefatigable worker and a kindly, generous, enthusiastic man, his death leaves a gap which no one living will precisely fill.

Sir Benjamin Ward Richardson married in 1857 Miss Mary Smith of Mortlake, by whom he leaves two sons and one daughter.

PATRICK FRAZER, M.D. ST. AND., L.R.C.S. EDIN.

DR. PATRICK FRAZER died at his house, Stoke Lodge, Cobham, Surrey, on Nov. 12th. He was born at Libberton Manse, in Lanarkshire, N.B, of which parish his father was minister, on March 5th, 1805. He was the sixth and youngest son of the family. He studied in Edinburgh and Dublin, and after passing as surgeon in 1828 went to Heidelberg and Paris to study. After leaving Paris he commenced his professional work as surgeon in one of the Honourable East India Company's ships, which went to China for tea, and he made two voyages to Bombay and China. In 1832 and 1833 he served under Admiral Sartorius and Admiral Sir Charles Napier, K.C.B., as surgeon of the flag-ship in the war between Dom Pedro and Dom Miguel, the result of which was the placing of Doña Maria on the throne. In consideration of his services he was made a Knight of the Portuguese Order of the Tower and Sword. About this time Lord Vernon entered the Tagus on board his yacht, when Dr. Frazer was introduced to him by Admiral Napier. Dr. Frazer accompanied Lord Vernon as his private physician. Lord Vernon died whilst cruising in the Mediterranean. Dr. Frazer commenced practice as a physician in Guildford-street, London. In 1854 he volunteered to serve in the Crimea. He was on duty at Scutari and before Sebastopol as staff surgeon till the close of the war in 1856, when he returned to London. He was chosen one of the physicians of the London Hospital in 1845 and retired in 1866. On his resignation the governors passed a resolution very cordially thanking him for his services during the period of twenty-one years of his office. He retired from practice about this time and devoted his time to the service of the Prudential Assurance Company, with which he had been associated from its foundation. In late years his sight failed, and though under the care of his colleague, Mr. John Couper, his trouble was greatly relieved he did not resume active work. His brother directors made him an honorary member of the board. Gifted with a singularly vigorous constitution and with a clear, steady intelligence, it was felt that he was a man always to be depended upon to do his duty and to do it right. His independence of character was well shown in his bearing towards the Royal College of Physicians of London. Although Dr. Frazer had in various fields of work been always respected for efficient and honourable conduct, the College passed over his natural claim as physician to the London Hospital to the Fellowship. Dr. Frazer took the course which became a man of spirit. He severed his connexion with the College by throwing up his Membership. He enjoyed the esteem and affection of all who knew him, and in their opinion the College lost a man who would have brought as much honour to it as it could confer upon him.

Medical News.

UNIVERSITY OF LONDON.—The following are the names of the successful candidates in the examinations indicated:—

M.B. EXAMINATION.

First Division.—Charles Bolton, B.Sc., Thos. Rupert Hampden Bucknall, Arthur Bassett Jones, John Dill Russell, and Wilfred Batten Lewis Trotter, University College; Maurice Were Coleman, Courtenay Henry Drake, and Edward Guy Dru Drury, St. Bartholomew's Hospital; Walter d'Este Emery, B.Sc., St. Bartholomew's Hospital and Queen's Hospital, Birmingham; Percy Robert Cooper, B.Sc., Owens College and Manchester Royal Infirmary; Robert William Dodgson, Alfred William Sanders, and William Charrington Wood, St. Mary's Hospital.

Second Division.—Evelyn George Beadon Adams, Percy Ward Brigstocke, Archibald Robert John Douglas, Sydney Penrose Huggins, James Hussey, Charles Harris Langford, Eldon Pratt, Henry Evans Thompson, Alexander Benjamin Tucker, and William Wrangham, St. Bartholomew's Hospital; Wilfred Allport, Queen's College and General Hospital, Birmingham; Frank Arthur Arnold and William Graddon Mortimer, London Hospital; Emile Dupont Aubin, William Francis Victor Bonney, and Charles Roberts, Middlesex Hospital; Cecil Banting, Herbert William Jackson, and William George Savage, B.Sc., University College; John Smedley Boden, Arthur Bousfield, B.Sc., William Robert Bryett, B.A., and Ralph Paul Williams, King's College; Eustace Bernard Bostock, Mason College and General Hospital, Birmingham; Arthur George Butler, Norman Howard Pike, Edward Thomas Scowby, Arthur Herbert Spicer, and Edmund Ivens Spriggs, Guy's Hospital; Walter Ernest Dixon, B.Sc., Frank Butler Thornton, Edward Owen Thurston, and Kirsop Bainbridge James Vickers, St. Thomas's Hospital; George Richard Elwin, Alfred Howell, and Atwood Thorne, St. Mary's Hospital; William Henry Holliday, Yorkshire College; Charles Ernest Makenzie Kelly, Owens College; Arthur Dickson Ketchen, Glasgow University and Western Infirmary; Octavia Margaret Sophia Lewin, Ethel May Vaughan, and Sarah Elizabeth White, B.Sc., London School of Medicine and Royal Free Hospital; Arthur Marriott, University College and Sheffield Medical School; Winifred Secretan Patch, B.Sc., and Mabel Elizabeth Webb, London School of Medicine for Women; George Basil Price, Bristol Medical School and St. Bartholomew's Hospital.

B.SC. EXAMINATION.

First Division.—Herbert Stanley Allen (Branches 1, 2, 3), Kingswood School and Trinity College, Cambridge; Stephen Allen Bennett (1, 2, 3), Queen's College, Cambridge; William George Bennett (1, 2, 4), Central Technical College; Charles Herbert Blomfield (1, 2, 3), St. John's College, Cambridge, and private study; Gustav Walter Borchardt (1, 2, 3), St. John's College, Cambridge; Joseph Samuel Bridges (4, 7, 8), City of London and King's Colleges; Sydney George Cook (1, 2, 3), Sidney College, Cambridge; Frank Sherwill Dawe (4, 6, 7), St. Mary's Hospital and Birkbeck Institute; G. Frederick Goodchild, B.A. (3, 4, 8), Sidney Sussex College, Cambridge; Mildred May Gostling (1, 4, 5), Royal Holloway College; Granville Morton Grace (1, 2, 3), private study; John Ansted Harrison (3, 4, 8), Royal College of Science and Mason College; Frank H. Hayward, B.A. (4, 8, 9), University College, Bristol; George Nevill Huntly (1, 3, 4), Royal College of Science and private study; Thomas Martin Lowry (2, 3, 4), Kingswood School and Central Technical College; Edgar W. Marchant (1, 2, 3), City and Guilds Central Technical College and private study; Gilbert Thomas Morgan (3, 4, 8), Royal College of Science, University Tutorial College, and private study; Albert Morris (4, 7, 8), Owens College and private study; Charles Nathan (1, 3, 4), Royal College of Science and private study; Henry Thomas Nunn (1, 3, 4), University Tutorial College and private study and tuition; Jonathan Orchard (1, 3, 4), People's Palace; David Owen (1, 3, 4), University College, Bangor, and Clare College, Cambridge; Raghavendra Row (4, 7, 8), University College; Edward John Russell (1, 3, 4), University College, Aberystwith, Owens College, and private study; Louis Gordon Rylands, B.A. (2, 3, 4), private study, University College, and University Tutorial College; Charles Henry Graham Sprankling (1, 2, 4), University College, Bristol, and private study; Sydney George Starling (1, 2, 3), Royal College of Science and private study; and Harold Albert Wilson (2, 3, 4), Yorkshire College.

Second Division.—Samuel Andrade, B.A. (Branches 1, 2, 3), private study and University College, Liverpool; Andrew Lamont Armour (1, 2, 3), Durham College of Science and private study; Francis A. Bainbridge (4, 6, 7), Trinity College, Cambridge; Wm. D. Braithwaite, B.A. (4, 5, 9), Yorkshire College; William Aifred Brend (3, 5, 8), Sidney Sussex College, Cambridge; A. H. Reginald Buller (5, 6, 8), Mason College; Lilian de M. Carey (5, 6, 9), University College and private tuition; Archibald Wildon Carr (4, 5, 6), University College; Harriette Chick (3, 4, 5), University and Bedford Colleges, London; Alfred Clough (3, 8, 9), Bradford Technical College and private study; Charles Gilbert Cullis (5, 6, 8), Royal College of Science; John Edwin Dalton (1, 3, 4), Yorkshire College; Maria Dawson (1, 4, 5), University College, Cardiff; Frank Dixon (3, 4, 8), King's College and People's Palace; Charles Edwards (1, 2, 3), University College, Bristol, and private study; David Ellis (3, 5, 9), Carlyon College and University College, Aberystwith; George Thomas Ferguson, B.A. (1, 3, 9), University Tutorial and Durham Science Colleges and private study; Katie Eliza R. Garaway (1, 2, 3), University College, Bristol, and University Tutorial College; Henry Garrett (1, 3, 4), University College, London, and Queen's College, Belfast; Lucy Hall (4, 5, 9), Westfield and University Colleges; Hermann Clark Haycraft (1, 2, 3), private study; Lilian Frances Heather (1, 2, 4), Royal Holloway College; Noël Heaton (4, 8, 9), University College; Eugene Edwin Hennesey (3, 4, 9), Royal College of Science; Arthur Edwin Horn (4, 6, 7), St. Mary's Hospital; Robert Huntley (1, 2, 3), Durham College of Science and private study; Henry Jackson (3, 4, 5) Bury Grammar School and Downing College; R. William Benjamin James (4, 5, 8), private study; Katharine E. Jay (4, 5, 8), Bedford College, London, University College, Aberdeen, and private study; William Lewins (2, 4, 9), Durham Science and University Tutorial College; Richard Ernest Lloyd (5, 6, 8), University College; Rosalie B. J. Ludham (3, 5, 6), Royal Holloway and University College; Peter Macaulay, B.A. (1, 3, 4), Mason College, Birmingham, Technical School, and private study; Arthur Thomas Masterman (4, 5, 6), Christ's College, Cambridge; William Mitchell (3, 8, 9), private study; George Murdoch, B.A. (1, 2, 3), private study and Glasgow Technical College; Florence Elizabeth Neale (1, 4, 5), Royal Holloway College; Frank Herbert Newman (3, 4, 8), Royal College of Science; John Charles Odam (1, 3, 4), People's Palace, Polytechnic, and University Tutorial College; Samuel Theodore Parkinson (5, 6, 8), University College, Aberystwith; Adelaide Jane Raisin (5, 6, 8), University College; William Ralston (1, 3, 4), Glasgow Technical College, University Tutorial College, and private study; Walter Smithson Rowntree (4, 6, 7), Royal College of Science, King's College, and private study; Ernest Justus Schwartz (1, 2, 5), King's and Carlyon Colleges; Gilbert Arden Shakespear, B.A. (1, 3, 6), Mason College; Frederick Solomon Spiers (1, 2, 3), Central Technical College and private study; Archibald Macfarlane Stewart (1, 2, 3), University College, Bangor, and Hartley Institution; George Sutherland, B.A. (2, 3, 4), University College and College of Chemists, Liverpool, and private study; Thomas Jacob Thomas (1, 3, 4), University College, Aberystwith, Hartley Institution, and private study; Arnold Thornton (1, 2, 3), private study, University Tutorial College, and University College, Bristol; Alfred Tingle (4, 7, 8), Aberdeen University and private study; Lilian Francis Usherwood (1, 2, 4), Royal Holloway College; David Williams (1, 2, 3), University College, Bangor; and William Henry Wynn (4, 6, 7), Mason College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the diploma of "Fellow" at a meeting of the Board of Examiners:—

Thursday, the 19th inst.:

Harold Vaughan Pryce, Cambridge University and University

College Hospital; Ernest William Ainley Walker, Oxford University and London Hospital; William Howard Unwin, Charing-cross Hospital; and William Douglas Harmer, Cambridge University and St. Bartholomew's Hospital.

Twelve gentlemen were referred back to their professional studies for six months.

Friday, the 20th inst.:

Reginald Horace Chilton, M.R.C.S. Eng., L.R.C.P. Lond., University College and Royal Infirmary, Bristol; Hugh Thomas Dyke Acland, Otago University, Dunedin, New Zealand, and St. Thomas's Hospital; John Brian Christopherson, M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; Francis William Brook, Guy's Hospital; and Arthur Strange, M.R.C.S. Eng., L.R.C.P. Lond., London Hospital and King's College, London.

Seven gentlemen were referred back to their professional studies for six months.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in November in the undermentioned subjects:—

Surgery.—J. H. Chambers, Manchester; H. Cross, Sheffield and London; A. G. Everard and S. H. Greene, Charing-cross Hospital; A. J. A. Lennane, University College; E. A. McAnally, St. George's Hospital; W. Mawer, St. Bartholomew's Hospital; J. P. Race, Manchester; W. F. Reckitt, Guy's Hospital; A. W. Robertson, St. Bartholomew's Hospital: G. E. H. Sargent, London; and J. A. Williams, McGill University.

Medicine, Forensic Medicine, and Midwifery.—H. Cross, Sheffield and London; A. J. A. Lennane, University College; and A. W. Oxford, Charing-cross Hospital.

Medicine and Forensic Medicine.—M. Sharp, Royal Free Hospital.

Medicine and Midwifery.—G. R. B. Gaudoin, Madras; W. A. Pierce, Liverpool; and J. P. Race, Manchester.

Medicine.—T. S. Biggs and G. Burton Brown, Guy's Hospital; G. C. Jackson, Cambridge and St. Mary's Hospital; and A. W. Shea, Sheffield and Dublin.

Midwifery.—J. B. Cautley, St. Bartholomew's Hospital, and A. D. Davies, London.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—Messrs. Biggs, Brown, Cross, Davies, Everard, Gaudoin, Greene, Jackson, Lennane, McAnally, Pierce, and Williams.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following gentlemen have passed the primary part of the examination:—

Daniel Aloysius Fitzgerald, Glin, county Limerick; and John Foley, Charleville, county Cork.

The following gentlemen having passed the final part of the examination have been admitted Fellows of the College:—

Alfred Richard Friel, Waterford; Joshua Pim, Killiney, county Dublin; and Charles Ward, Pietermaritzburg, South Africa.

BRUSSELS UNIVERSITY.—The following candidates were successful at the examination held at the University of Brussels for the M.D. degree during November:—

J. C. Leman, M.R.C.S., L.R.C.P.; Marie R. S. Holst, L.S.A.; Elizabeth Hudson, L.R.C.P. & S. Edin.; R. W. Branthwaite, M.R.C.S., L.R.C.P., D.P.H.; R. Wilkinson, M.R.C.S., L.R.C.P.; and A. W. F. Sayers, M.R.C.S., L.R.C.P.

FOREIGN UNIVERSITY INTELLIGENCE.—*Amsterdam:* Dr. R. H. Saltet has been appointed to the Professorship of Hygiene in succession to Dr. M. J. Forster.—*Ghent:* Dr. Heymans has been appointed Professor of Therapeutics and Pharmacology, Dr. van Duyse has been appointed Extraordinary Professor of Pathological Anatomy, and Dr. Gilson, Extraordinary Professor of Chemistry and Pharmacy.—*Königsberg:* Dr. Hallerworden has qualified as *privat-docent* in Children's Diseases.—*Liege:* Dr. C. Julin has been appointed Professor of Anatomy; Dr. Fraipont, Extraordinary Professor of Midwifery and Gynæcology; and Dr. Schiffers, Extraordinary Professor of Laryngology.—*Heidelberg:* Dr. Dinkler, Professor of Medicine, has resigned his chair for the purpose of undertaking the charge of the hospital at Aix-la-Chapelle.—*Munich:* Dr. Bumm of Erlangen has been appointed Professor of Psychiatry in succession to Dr. Grashey.—*Vienna:* Dr. Theodor Beer has qualified as *privat-docent* in Comparative Anatomy.—*Moscow:* Professor Zakharin has definitely retired from the Professorship of Therapeutics and will only lecture on festival occasions; Dr. Popoff has been appointed as his successor. Dr. Bubnoff of Iurieff (Dorpat) has been appointed to the Professorship of Hygiene in succession to Professor Erisman.—*Berne:* Dr. Jadassohn has been appointed to succeed Professor Lesser, who has gone to Berlin, in the chair of Dermatology.

THE Hon. Sec. of the Kingston Photographic Society (Dr. W. E. St. L. Finny) informs us that a demonstration of x ray photography will be given by the society at the Sun Hotel, Kingston, on Wednesday, Dec. 2nd, at 8 P.M.

TOYNBEE NURSING GUILD.—On Tuesday, Nov. 24th, Dr. Stephen Mackenzie lectured to members of the Toynbee Nursing Guild on What Doctors Expect from Nurses. Sir Vincent K. Barrington occupied the chair, and was supported by Sir John Gorst, M.P., Canon Barnett, Lady (Vincent) Barrington, Mrs. Mackenzie, Mrs. Barnett (President of the Guild), Miss Rosalind Paget, and Mrs. Maitland, M.L.S.B.

ALDERMAN W. P. TRELOAR has issued an appeal to the public to supplement the means which are annually placed at his disposal for the New Year's entertainment of about 1500 poor children in the Guildhall. These children are selected by the Ragged School Union from the poorest districts in London, and many of them have crippled brothers or sisters who will be denied all participation in the treat unless there is a surplus fund sufficiently large to send them a seasonable hamper each.

SMALL-POX AT REDRUTH.—The prevalence of small-pox has continued now at Redruth for several weeks, and whilst many cases have occurred, some even during the present week, there have already been six deaths registered from the disease. It is stated that all the deaths have been of unvaccinated children, primary vaccination having been permitted to fall into arrear for some time past. The present outbreak of small-pox has, however, had the effect of sending parents to the public stations, and 15,000 people have been vaccinated since the first case was discovered. The board schools remain closed.

METROPOLITAN HOSPITAL SUNDAY FUND.—A meeting of the Metropolitan Hospital Sunday Fund was held at the Mansion House on Thursday, Nov. 25th, when it was recommended that June 20th, 1897, should be the date to be fixed by the Council for the annual Hospital Sunday Collection. It was also decided to recommend that the Council for the year 1896, together with the retiring members, be re-elected for the year 1897, with the Right Rev. Bishop Barry in place of the Hon. E. Carr Glyn, appointed Lord Bishop of Peterborough; Mr. H. Cosmo Bonsor, M.P., in place of the Right Hon. G. Faudel-Phillips, now Lord Mayor; the Hon. Sidney Holland, in place of Admiral the Hon. F. Egerton, deceased.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—At the first meeting of the twelfth session of this society, which was held on Oct. 28th, the following office-bearers were elected:—Honorary President: Professor A. R. Simpson (Edinburgh). President, Dr. Malcolm Black. Vice-Presidents, Dr. J. Nigel Stark and Mr. Alex. Miller. Treasurer, Dr. John Lindsay. Secretary, Dr. Robert Jardine. Reporting Secretary, Dr. A. W. Russell. Pathologist, Dr. J. M. Munro Kerr. Councillors, Dr. T. W. Jenkins, Dr. A. R. Gunn, Dr. H. C. Reid, Dr. A. Richmond, Dr. G. Balfour Marshall, and Dr. Alice J. MacLaren. Dr. Arthur Mechan afterwards read the notes of a very unusual complication of labour due to cystic enlargement of both kidneys. When the head and shoulders had been delivered without difficulty further progress was arrested, and he found that even after considerable traction under chloroform the body could not be delivered and he was compelled to eviscerate. The obstruction was due to polycystic enlargement of both kidneys, the right weighing over fourteen ounces and the left over sixteen ounces.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BEAVER, R. A., M.B. Vict., Ch.B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Hinton St. Mary Sanitary District of the Sturminster Union.

BENSON, THOS., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Stanley and Tanfield Urban District Councils.

BRIGGS, J. H. D., M.B. Lond., L.R.C.P. M.R.C.S., has been appointed Assistant House Surgeon to the South Devon and East Cornwall Hospital.

BRUNYATE, T. T., M.A., M.D., has been appointed Honorary Surgeon to St. Bartholomew's Hospital, Rochester.

BURNETT, W. E. S., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health by the Mottram in Longdendale Urban District Council.

CALVERT, C., L.R.C.P., M.R.C.S., has been appointed House Physician to the Royal Free Hospital, Gray's-inn-road, London.

CLAYTON, E. G., F.I.C., has been appointed Public Analyst by the Fulham Vestry.

COLLIS, E. L., B.A. M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

CONFORD, G. J., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

DAVEY, R. S., M.D. St. And., M.R.C.S., has been appointed Medical Officer for the Ringwould Sanitary District of the Dover Union.

DAWNAY, A. H. P., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

DYBALL, B., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

FARMER, W. H., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Royal Hospital, Portsmouth.

FRAZER, W. D., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

GERVIS, F. H., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

HALL, T. GREENWOOD, M.B., B.S. Durh., has been appointed District Surgeon for Koffyfontein, Orange Free State.

HEDGES, J. A., M.R.C.S., has been re-appointed Medical Officer of Health by the Leighton Buzzard District Council.

HOME, A. L., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

HOPKINSON, E., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

JELLETT, J. W. H., M.D. Dubl., B.Ch., has been appointed Medical Officer of Health by the Heavitree Urban District Council.

JIMINEZ, G., M.B., B.S., has been appointed Surgeon to the San José Hospital, Costa Rica.

KENT, P. W., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

KINSEY, R. H., M.R.C.S., has been appointed Consulting Surgeon to the Bedford General Infirmary and Fever Hospital.

LAWSON, R., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

MACNAB, J. C. G., M.B. Glasg., F.R.C.S. Edin., D.P.H., has been appointed Parochial Medical Officer, Dysart, vice Goodenough.

MARTINEAU, A. J., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

NASH, E. H. T., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

NASH, WALTER GIFFORD, F.R.C.S., has been appointed Surgeon to the Bedford General Infirmary, vice R. H. Kinsey, resigned.

NEWTON, H. W., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Chelmsford Prison.

POLLARD, J. E. L., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the St. Margaret's Sanitary District of the Dover Union.

RAY, W. J. ORBELL, L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

RICHARDS, L. W., M.B., B.S. Durh., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

SCATCHARD, J. P., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

SELIGMANN, C. G., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department of St. Thomas's Hospital.

SIKES, A. W., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

SMITH, J., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

STACK, MAURICE TANCRED, M.B., C.M. Glasg., has been appointed Assistant House Surgeon to the Taunton and Somerset Hospital.

STAINER, E., M.A., M.B., B.Ch. Oxon., has been appointed Clinical Assistant in the Electrical Department of St. Thomas's Hospital.

STRANGE, R. G., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

STREETEN, P. E., L.R.C.P. Edin., M.R.C.S., D.P.H. Irel., has been re-appointed Medical Officer by the New Swindon Urban District Council.

STROVER, H. C., L.S.A., L.A.H. Dubl., has been re-appointed Medical Officer for the Tempsford Sanitary District of the Biggleswade Union.

TAYLOR, G. E. O., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

TOOMBS, H. G., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

YEARSLEY, MACLEOD, F.R.C.S., has been appointed House Surgeon to the Royal Ear Hospital, Soho, W.

YELF, J. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Shipston Sanitary District.

WAREHAM, S. J., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Lond., has been appointed House Physician to Charing-cross Hospital.

ZUMBADO, F., M.B., B.S., has been appointed Surgeon to the San José Hospital, Costa Rica.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House Surgeon for the Western Branch, unmarried. Salary £140 per annum (less board at 12s. per week), with furnished apartments, coals, gas, and attendance. Applications to Honorary Secretary, Board-room, Queen's-road, Brighton.

CARDIFF INFIRMARY.—Assistant Resident Medical Officer, for six months. Board, washing, and apartments provided.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum and board and residence.

COUNTY ASYLUM, Whittingham, Lancashire.—Assistant Medical Officer, unmarried. Salary commencing at £100, with prospect of an annual rise of £25 up to £200, with furnished apartments, board, attendance, and washing.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester-square, W.—Demonstrator. Honorarium £50 per annum.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeoncy for six months. Board, residence, and washing provided.

GORDON HOSPITAL FOR FISTULA, &c., Vauxhall-bridge-road.—Assistant Surgeon.

HOSPITAL FOR SICK CHILDREN, Newcastle-on-Tyne.—Resident Medical Officer. Salary £80, with board, lodging, and laundry.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant House Physician (non-resident) for three months.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer at Bowdon, Cheshire. Salary £60 per annum, with board, apartments, and washing.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Convalescent Hospital at Cheadle (unmarried) for twelve months. Salary £150 per annum, with board and residence.

PARISH OF COLONSAY.—Medical Officer. Salary £50; grants and subscriptions sufficient to make income up to £100, exclusive of practice may be relied upon. Application to Mr. N. Macmillan, Colonsay by Greenock.

PORTSMOUTH LUNATIC ASYLUM.—Assistant Medical Officer, unmarried. Salary £100 per annum, with furnished apartments, board, fuel, lighting, and washing.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, London.—Honorary Assistant Medical Officer.

WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—Resident House Surgeon (lady or gentleman). Salary £50 per annum, with board, lodgings on the premises, and washing.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser, unmarried, for two years. Salary £70 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BADDELEY.—On Nov. 18th, at Weston House, Newport, Salop, the wife of Charles Edward Baddeley, M.D. Lond., of a son.

COLLIER.—On Nov. 20th, at St. Mary's Entry, Oxford, the wife of William Collier, M.D., F.R.C.P., of a daughter.

FERRABY.—On Nov. 18th, the wife of G. A. Ferraby, L.R.C.P., M.R.C.S. St. Mary-street, Birmingham, of a daughter (Sylvia Maud).

MACEVOY.—On Nov. 21st, at 41, Buckley-road, Brondesbury, N.W., the wife of H. J. Macevoy, M.D., B Sc. Lond., of a daughter.

MACKAY.—On Nov. 18th, at The Cloisters, Knaresborough, the wife of Ian D. Mackay, B.A., M.B., C.M., of a daughter.

MATTHEWS.—On Nov. 15th, at Rusley House, East Ham, Essex, the wife of Dr. J. Nelson Matthews, of a son.

RICHARDSON.—On Nov. 21st, at Benha Villa, Saxmundham, Suffolk, the wife of J. C. Ryder Richardson, M.B., B.C., M.A., of a daughter.

SHAW.—On Nov. 19th, at Sedgemoor, St. Austell, Cornwall, the wife of Archd. Shaw, M.B., C.M. Glasg., of a daughter.

WEAVER-ADAMS.—On Nov. 19th, at Church-street, Slough, the wife of E. Weaver-Adams, F.R.C.S., of a daughter.

MARRIAGES.

COVEY—WILSON.—On Nov. 11th, at the Church of the Sacred Heart, Hanley, by the Rev. J. Keating, William J. Covey, M.R.C.S., L.R.C.P., of Ellastone, Staffordshire, son of William N. Covey, R.N., to Helen, second daughter of the late James Wilson, M.D., of Newchurch-in-Rossendale.

DEATHS.

BELL-IRVING.—On Nov. 24th, at Sunny Bank, Mayfield, Sussex, George Bell-Irving, M.R.C.S., aged 78 years.

HICKLING.—On Nov. 18th, at Davos, Switzerland, Mary (May) wife of Thomas Hickling, of Sulgrave, Banbury, and eldest daughter of the late Rowland Hunt, of Boreatton Hall, Shropshire.

HORSFALL.—On Nov. 24th, at Marham, Dorothy Vincent, youngest daughter of Henry Horsfall, M.D., aged 18 years.

RICHARDSON.—On Nov. 21st, at his residence, 25, Manchester-square, W., Sir Benjamin Ward Richardson, M.D., F.R.S., LL.D., F.R.C.P., F.S.A., aged 68.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (2nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (3rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (5th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (30th).—SOCIETY OF ARTS.—8 P.M. Prof. V. B. Lewes: The Use of Gas for Domestic Lighting. (Cantor Lecture.)

TUESDAY (1st).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Prof. J. McFadyean: Swine Fever (with lantern demonstration).—Dr. Rolleston: Mediastinal Tumour arising from the Thymus.—Dr. R. P. Cockburn: Hydronephrosis in an Infant due to a Pelvic Cyst.—Mr. W. McAdam Eccles: Hernia of the Vermiform Appendix. Card Specimen:—Dr. Rolleston: Tumour on the Anterior Mediastinum.

WEDNESDAY (2nd).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Dakin, Dr. A. Routh and others. Dr. C. H. Roberts: Notes of a Case of Primary Epithelioma of the Vagina. Paper:—Dr. H. R. Spencer: Three Cases of Cæsarean Hysterectomy (Porro's operation).

THURSDAY (3rd).—HARVEIAN SOCIETY (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Dr. W. F. Cleveland: Induction, and its Association with the History and Progress of Medicine (First Harveian Lecture).

FRIDAY (4th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.15 P.M. Mr. W. Arbuthnot Lane: On the Applied Mechanics of the Nose and Pharynx.—Mr. E. Clarke: On Detachment of the Retina (illustrated by specimen).

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—Clinical Evening (Living Specimens). Mr. Keetley: (1) A Case of Congenital Dislocation of the Hip; (2) A Case of Imperforate Rectum.—Dr. Robinson: A Case of Ovariotomy with Clamped Pedicle. Hæmorrhage from the Abdominal Sac during Menstruation.—Dr. Chapman: A Case of Cretinism.—Dr. Campbell Pope: A Case of Fracture of the Lower Epiphysis of the Humerus, with Radiograph.—Dr. Abraham: A Case of Duvergie's Pityriasis Rubra Pilaris.—Dr. H. Sutherland: (1) A Case of Supernumerary Nipple; (2) A Case of Extensive Varicose Veins.—Dr. P. Paton: A Case of Nephrolithotomy.—Mr. McAdams Eccles: Cases of Family Exostoses.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (1st).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-st., W.C.).—2.30 P.M. Dr. Lees: Rheumatism and Heart Disease.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Gowers: Lecture.

WEDNESDAY (2nd).—HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. Biss: Chronic Pneumonia and its Results.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Abraham: Skin Affections.

THURSDAY (3rd).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-st., W.C.).—4 P.M. Dr. Batten: Infantile Paralysis.

FRIDAY 4th.—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-st., W.C.).—11.15 A.M. Dr. Penrose: Diseases of the Digestive Tract.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Horsley: Lecture.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 26th, 1896.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 20	30·02	W.	49	47	72	52	37	...	Overcast
,, 21	30·46	S.W.	39	38	53	51	37	...	Foggy
,, 22	30·53	S.W.	49	47	51	50	39	...	Foggy
,, 23	30·69	E.	42	41	46	45	40	...	Foggy
,, 24	30·62	S.E.	42	40	45	45	41	...	Overcast
,, 25	30·54	E.	42	40	47	45	41	...	Overcast
,, 26	30·33	N.E.	41	39	43	40	40	...	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

The Index for the first half-yearly volume for 1896 was given in the issue of June 27th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*., or post free 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

"STERNAL DISLOCATION OF THE CLAVICLE: AN APPLIANCE WANTED."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 24th "Surgeon" asks for advice in healing forward dislocation of the sternal end of the clavicle. Several weeks have elapsed without eliciting a reply. Would not "Surgeon" be wise to consult the cases noted in the "Medical Digest and Appendix," section 1725: 1?

I am, Sirs, yours truly,

Boundary-road, N.W., Nov. 24th, 1896. RICHD. NEALE, M.D. Lond.

"CLUB PRACTICE IN WYNAAD."

To the Editors of THE LANCET.

SIRS,—With reference to the letter from Mr. George Romilly which appeared in THE LANCET of Oct. 3rd, will you permit me to enter into further details? In my first letter I should have explained that in warning candidates of what they might expect in taking up such a practice I particularly intended to draw attention to treatment received by myself after months of hard work, discomfort, and exposure to heat and malaria. A letter was received by me dispensing with my services in a very curt manner, but no reason for their decision was assigned, and as I am absolutely unaware what the cause of complaint against me was—if there was any—I naturally considered such treatment decidedly unfair, not to say ungentlemanly. Since writing to you last it has been plainly proved that the letter dismissing me in so summary a manner did not represent the feeling of the entire district, as many of the most influential planters were away or not present at the meeting in which it was resolved to change their medical officer, and on the return of these other gentlemen the offensive letter was withdrawn, I, of course, immediately tendering my resignation. I do not for one moment cavil at their wish to change, but simply at the extraordinary way in which I was informed of the fact and which might have damaged my prospects to some extent. Regarding Mr. Romilly's accusation, it might perhaps be as well if his own letter were strictly accurate before accusing others of gross inaccuracy. My predecessor resigned in 1894, not in 1893. I am therefore leaving before the expiration of three years' service here, and I repeat that in my opinion, which can be verified by the entries in my visiting and prescription books, whatever the salubrity of the district may have been during the period of Mr. Romilly's residence here, it is now distinctly malarious and unhealthy for certainly five months, and even during the whole year at intervals, the conditions necessary for the generation and development of malaria being ever present in these jungle and hilly districts. Regarding the death of the medical man which Mr. Romilly ascribes to liver complaint. This does not disprove my statement, as malaria is a most fruitful cause of liver complaint. Another medical man, I believe, started on a salary of Rs. 1000 per mensem, but left for Australia when he found it had gone down to less than half, and there is nothing to show that he secured a living there before leaving. I simply wish to point out that a club practice under these circumstances is not always a bed of roses. The conditions under which a medical man works here are widely different, and certainly, unless the salary is sufficiently high, the agreement for at least three years, and considerably more consideration shown than it has been my lot to meet with, the game is not worth the candle.

I am, Sirs, yours truly,

Wynaad, Nov. 3rd, 1896. FAIRPLAY.

Dr. Young (Beyrout).—The letter signed "Nurse Greene," and dated from 10, High Holborn, London, is an obscene and disgusting production. We do not know if this filthy circular is widely disseminated, but we advise that the Post Office be communicated with by all who have received it.

A Young Doctor.—Our correspondent had better communicate with the Cremation Society of England, 8, New Cavendish-street.

J. B.—There would be no breach of etiquette in applying.

ANÆSTHESIA UNDER RELIGIOUS MANIA.

AT Fano, on the Adriatic, some thirty miles north-west of Ancona, a girl has had to be removed to the "manicomio" (madhouse) in circumstances more frequently met with in mediæval than in modern times. Till within a few days ago she was an inmate of the Theresian nunnery and shortly about to take the veil. But hysteria of a very aggravated kind declared itself and she was transferred, as stated, to the "manicomio." Religious mania was the special form assumed by the malady, and her proceedings under its influence are pathologically interesting. Without the least sign or consciousness of pain, with almost ecstatic delight, she thrust needles into various parts of her person. From the right mamma alone no fewer than thirty-eight have already been extracted. By her own confession she has swallowed a great number of needles, deriving, as she says, not pain but pleasure from the proceeding. Besides this she has made repeated attempts to commit suicide. Whether religious mania, hysterically induced, can be developed in a patient whose family history presents no instance of mental disorder is an unsettled problem of medico-psychology. In this girl's case the history would favour a negative answer. She has had more than one certified lunatic among her ancestors.

Stye.—1. There is not, we think, any special book, but all information will be found in an article by Mr. Alfred Ashby in Stevenson and Murphy's "Treatise on Hygiene and Public Health," vol. ii., p. 731 (Churchill). The book is in three volumes. 2. He must not advertise in the way mentioned. 3. Yes.

HOMES FOR THE DYING.

IT is announced that the Council of Friedenheim, a home for the dying in the N.W. district, have decided to erect a new ward for the admission of patients suffering from malignant disease.

Anti-Humbug has omitted to enclose his name and full address.

WHEN IS THE EXACT MOMENT OF DEATH?

To the Editors of THE LANCET.

SIRS,—Perhaps one of your medical writers may be in a position to give me an answer to the following query. It has occurred to me, as no doubt also to every medical man in active practice, to witness a large number of deaths. In many cases—according to the usual acceptation—it is almost impossible to tell the exact moment of dissolution. When the last few convulsive inspirations take place we simply wait to see if they will be repeated, and after waiting a few moments and everything remaining quiescent we conclude that that is the time of decease. There is one sign, however, which I think indicates much more clearly the exact moment when life is extinct. We have read many times in poetical effusion and elegant discourses of a phrase like the following, "When the thread of life is snapped"; but this, though used merely metaphorically, comes very near, I believe, to reality. If anyone watches closely the few last spasmodic gasps of the dying he will hear in many cases a peculiar snap somewhere in the region of the head; it is not loud, but it can be plainly heard if watched for. What this may be owing to I cannot say, but can only vouch for the fact. I have never heard of it being taken notice of in any medical literature with which I am acquainted, but no doubt many of your readers have noted the fact and may be able to give some explanation of so important a feature in the last moment of life.—I am, Sirs, yours faithfully,

Nov. 24th, 1896. D. FERGUSON, L.R.C.S., L.R.C.P. Edin.

Only a Country Surgeon.—This is just the kind of case where publicity is thrust upon a man. The patient and the circumstances alike made it certain that the name of the medical attendant would sooner or later get into one paper and be copied thence into the press of the kingdom.

R. G. T.—The circumstance has been brought already to the notice of the biographer. We have no idea how long the Mesmeric Hospital existed, but there is no such institution now.

A. J. (Norwich).—The lectures in question were published in full in THE LANCET. To the best of our knowledge they have never been republished.

Robert.—No; the question was answered fully in the columns of THE LANCET of Nov. 21st.

C. E. A.—We should say a guinea would be a reasonable sum.

A NEW TREATMENT OF POSTPARTUM HÆMORRHAGE.

A GENERAL practitioner living in Newcastle, N.S.W., reports in a colonial contemporary that he was lately called to a case of severe postpartum hæmorrhage and found the midwife in charge administering a spoonful of the patient's blood (which had passed per vaginam) in a glass of water every half hour. It is stated that this midwife does "an immense practice."

Mr. H. E. March.—"Orthopædic Surgery," A. H. Tubby (Messrs. Macmillan and Co., Ltd.); "Deformities of the Human Foot," W. J. Walsham and Kent Hughes (London: Baillière, Tindall, and Cox).

F.R.C.S. Edin.—If the contractor or his authorised representative either gives the order for the treatment or sends for the medical man we take it he would be liable, but not otherwise.

E. C. W.—We agree with our correspondent in the main, but his statements are too general to be of value.

F. W. E.—Yes.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Dover Standard, Birmingham Gazette, Worcester Herald, Portsmouth Times, Hampshire Telegraph, Glasgow Herald, Times of India, Pioneer Mail, New Zealand Herald, Western Morning News, Ceylon Observer, Torquay Times, Levant Herald, United Service Gazette, Le Temps (Paris), Scotsman, Leamington Chronicle, Liverpool Daily Post, Builder, Leicester Post, Southport Visitor, Northampton Mercury, Wellington News, Hull Daily Mail, Architect, Bradford Observer, Lancashire Express, Leeds Mercury, East Anglian Daily Times, Northern Echo, East London Observer, Newcastle Leader, Yorkshire Post, Manchester Courier, Bristol Mercury, Wolverhampton Chronicle, Blackburn Standard, Bicester Advertiser, Cheshire City News, Croydon Express, Barking Advertiser, Kentish Express, Sussex Daily News, Citizen, Lincolnshire Chronicle, Suffolk Chronicle, Rangoon Gazette, Hertfordshire Mercury, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, City Press, Reading Mercury, Sanitary Record, Guy's Hospital Gazette, Surrey Advertiser, Mining Journal, St. Bartholomew's Hospital Journal, Local Government Journal, Kelso Mail, Falkirk Herald, Elgin Courant, Windsor Chronicle, Dundee Advertiser, Carmarthen Weekly Reporter, Nairnshire Telegraph, Buckinghamshire Express, The Herald, Western Mail, Bexhill-on-Sea Observer, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. F. H. Alderson, Lond.; Mr. C. E. Abbott, Taunton; Messrs. Arnold and Sons, Lond.; Messrs. Armour and Co., Lond.; Apollinaris Co., Lond.; Mr. Anderson, Lond.; Mr. E. B. W. Atkins, Pencaw, Glamorganshire.

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C.—Dr. H. E. L. Canney, Luxor, Upper Egypt; Dr. J. Coats, Glasg.; Dr. F. W. Cock, Lond.; Messrs. Callard and Co., Lond.; Mr. W. F. Clay, Edin.; Mr. C. Clark, Wolverhampton; Messrs. J. and A. Churchill, Lond.; Cardiff Infirmary, Sec. of; County Asylum, Whittingham, Supt. of; Mr. W. H. Cooke, Bath.

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Z.—Zenana Medical College, Lond., Sec. of.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Hawes; Dr. T. G. Atkins, Cork; A. D. M., Edin.; Dr. G. N. Adams, Lond.; Messrs. Austin and Son, Clifton.

B.—Mr. L. C. Braganza, Dublin; Dr. F. W. Burton-Fanning, Norwich; Mr. J. Bates, Heaton Mersey; Mr. H. Bond, Lond.; Bradford Union, Clerk of; Mr. G. L. Barker, Oundle; Mr. H. A. Burridge, Hemel Hempstead; Mr. W. C. Brown, Lond.; B. M., Kettering; Mr. A. Boyd, Dublin.

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D.—Dr. E. Diver, Kenley; Dr. P. R. Dodwell, Lond.; Dr. D. d'Esterre, Lond.; Mr. J. E. Dunn, Preston; D. P. H., Lond.

E.—Dr. W. A. Evans, Bradford; East Surrey Water Co., Redhill, Manager of.

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J.—Mr. T. Jakes, Handcross; Mr. E. Jeffery, St. Austell; Justice, Lond.; Dr. T. Jackson, Colwyn Bay.

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